

**The impact of capitalising long-term operating leases on the financial ratios of
the top forty JSE-listed companies**

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ABSTRACT

Title: The impact of capitalising long-term operating leases on the financial ratios of the top forty JSE-listed companies

Keywords: Capitalising, FASB (Financial Accounting Standards Board), finance lease, IASB (International Accounting Standards Board), IFRS (International Financial Reporting Standard), long-term operating leases, minimum lease payments, off-balance-sheet financing, IAS (International Accounting Standard), JSE (Johannesburg Stock Exchange)

Operating leases form an integral part of companies' financing structures in today's economic environment. Some accounting standard setters and other financial statement users are of the opinion that the current standard on accounting for operating leases, IAS 17, does not provide sufficient guidelines on disclosure of a company's leasing activities. The current accounting standard on leases gives companies the opportunity to classify lease contracts into different classes and this may lead to off-balance-sheet financing. This problem is currently being addressed by the IASB as they are in the process of developing an improved IAS 17.

The main focus of this study was to determine the impact of the improved accounting standard on the financial statements and the resulting financial ratios of the JSE Top 40 companies, when operating leases are accounted for as on-balance-sheet debt. The differences between the current IAS 17 and the Exposure draft (ED/2010/9) were identified and the comparison indicated significant differences between these two approaches on accounting for operating lease activities.

As financial ratios are used regularly by investors and other stakeholders, the effect on the financial ratios due to the proposed change was determined using a capitalisation model that is in line with the proposals set out in the released exposure draft (ED/2010/9).

The focus of the IASB in developing this exposure draft was to give the users of the financial statements a universal picture of the leasing activities that the company is engaged in.

The final calculated financial ratios support the IASB's objective of ensuring that financial statement users are not left uninformed about any of the financing activities that reflect the financial risks that stakeholders are exposed to if indeed a company is engaged in operating lease activities.

In summary, the proposed changes to IAS 17 in connection with operating leases as a form of financing will not leave stakeholders with any lack of understanding the full scope of the company's financing structure. This will lead to companies having to inform their shareholders about the possible effects of the proposed change in the accounting standard for lease accounting. Recommendations on strategies that companies can follow in order to inform their stakeholders about the implications were made in this study.

This study does not only serve as an enhancement to a study performed on the effect of treating operating leases as finance leases on financial ratios of listed German companies, but it is also the first study performed of such a nature in South Africa.

OPSOMMING

Titel: Die impak van kapitalisering van langtermynbedryfshure op die finansiële verhoudings van die top veertig maatskappye gelys op die JSE in Suid-Afrika

Sleutel terme: Kapitalisering, FASB (Finansiële Rekeningkunde Standaarde Raad), Bruikhuur, IASB (Internasionale Rekeningkunde Standaarde Raad), IFRS (Internasionale Finansiële Verslagdoenings Standaard), langtermynbedryfhuur, minimumhuurbetalings, “off-balance-sheet” finansiering, IAS (Internasionale Rekeningkunde Standaard), JSE (Johannesburg Effektebeurs).

Bedryfshure vorm ’n groot deel van maatskappye se finansieringsstrukture in vandag se ekonomiese omgewing. Sommige rekeningkundige standaardstellers en ander gebruikers van finansiële state is van mening dat die huidige rekeningkundige standaard oor die hantering van bedryfshure nie genoeg riglyne bied rakende die openbaarmaking van ’n maatskappye se bedryfshuur-aktiwiteite nie. Die huidige standaard met betrekking tot hure bied maatskappye die keuse om hure in twee klasse te verdeel wat kan lei tot “off-balance-sheet” finansiering. Die probleem word tans deur die IASB aangespreek, aangesien hulle in die proses is om ’n verbeterde IAS 17 saam te stel.

Die hoof-fokus van die studie was om die impak van die verbeterde rekeningkundige standaard op die finansiële state en finansiële verhoudings van die Top 40 maatskappye gelys op die JSE te bepaal, indien bedryfshure as bruikhure hanteer word. Die verskille tussen die huidige IAS 17 en die voorgestelde rekeningkundige standaard is geïdentifiseer en dit toon noemenswaardige verskille tussen die twee benaderings in verband met die rekeningkundige hantering van bedryfshuur-aktiwiteite.

Aangesien finansiële verhoudings gereeld deur beleggers en ander belanghebbendes gebruik word, is die effek van die voorgestelde verandering bepaal deur van ’n kapitaliseringsmodel gebruik te maak. Hierdie model is in lyn met

die voorstelle soos uiteengesit in die besprekingsdokument (ED/2010/9) vrygestel deur die IASB.

Die fokus van die IASB tydens die ontwikkeling van die besprekingsdokument (ED/2010/9) was om gebruikers 'n globale beeld te bied rakende die huur-aktiwiteite waarby die maatskappye betrokke is.

Die finale berekende finansiële verhoudings ondersteun die fokus van die IASB om gebruikers nie oningelig te laat rakende die finansieringsaktiwiteite van die maatskappy nie. Die finansiële risiko waaraan belanghebbendes blootgestel word indien die maatskappye verbind is tot bedryfshuurkontrakte, word dus onder alle belanghebbendes se aandag gebring.

Ter opsomming; die voorgestelde veranderinge aan IAS 17 in verband met bedryfshure as 'n vorm van finansiering sal belanghebbendes met geen onduidelikheid laat met betrekking tot die volle omvang van die maatskappye se finansieringstruktuur nie. Hierdie verandering sal daartoe lei dat maatskappye hul aandeelhouers in kennis sal moet stel oor die moontlike gevolge van die voorgestelde verandering aan die rekeningkundige standaard met betrekking tot huur-aktiwiteite. Aanbevelings oor sodanige kennisgewingstrategieë is in die studie gemaak.

Die studie was nie alleen 'n verbetering van 'n vorige studie uitgevoer oor die effek om bedryfshure as bruikhure te hanteer op gelyste Duitse maatskappye nie, maar dit is ook die eerste studie van sy soort in Suid-Afrika.

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LIST OF ABBREVIATIONS

AMRT:	Amortisation
COMP:	Compute
Dg:	Digression factor
EBIT:	Earnings before interest and tax
ED:	Exposure Draft
EPS:	Earnings per share
EY:	Ernst & Young
FASB:	Financial Accounting Standards Board
FV:	Future value
GAAP:	General Accepted Accounting Practice
I:	Interest rate
IAS:	International Accounting Standard
IASB:	International Accounting Standards Board
IASC:	International Accounting Standards Committee
IFRS:	International Financial Reporting Standards
INTR:	Interest
IT:	Information Technology
JSE:	Johannesburg Stock Exchange
LTD:	Limited
MLP:	Minimum Lease Payments

N: Number of periods

N/A: Not Applicable

PE: Price Earnings

PMT: Payment

PRINC: Principle

PV: Present value

PWC: PriceWaterhouseCoopers

R: Rand

SARS: South African Revenue Service

US: United States

VAT: Value Added Taxation

WNOS: Weighted number of ordinary shares

CHAPTER 1

1. INTRODUCTION

1.1 INTRODUCTION TO THE STUDY

1.1.1 Background

Leasing is an important source of financing assets in the South African economic environment. A lease can be defined as an agreement whereby the lessor has conveyed the right to use an asset for a period of time for a series of payments by the lessee (IASB, 2009b:1200). It is therefore important that the accounting treatment of leases is in such a way that the users of the financial statements cannot only interpret the information, but also obtain a universal picture of the leasing activities of the company.

Two of the major global standard setters are the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB). The accounting standard dealing with lease accounting is the International Accounting Standard (IAS) 17, while its United States (US) counterpart is General Accepted Accounting Practice (GAAP) Codification No. 840 (IASB, 2009b:1201; US GAAP, 2011). Currently, both the International Financial Reporting Standard (IFRS) in IAS 17 and US GAAP classify leases into two classes: i) operating and ii) financial leases (Bryan, Lilien & Martin, 2010:36).

According to the latest edition of IAS 17, an operating lease is a lease that is not classified as a finance lease and a finance lease is a lease where the rewards and risks incidental to ownership of the asset are transferred from the lessor to the lessee (IASB, 2009b:1201).

Standard setters such as the IASB, are of the opinion that the current accounting standard on leases does not give clear enough guidelines on disclosure of assets and liabilities that arise from leasing contracts. Furthermore, the notes to the financial statements do not contain enough information for the users of the financial statements to adjust the figures so they can get a better understanding of the company's leasing activities (Grossman & Grossman, 2010:6).

The fact that leases can be classified into operating leases rather than finance leases holds a great advantage, because it creates opportunities for companies to have off-balance-sheet financing. Therefore, companies avoid on-balance-sheet debt (Fulbier, Silvia & Pferdehirt, 2008:123).

In 1996, a special report was put forward by the IASB and the FASB, named G4 + 1, which suggested a new approach to the accounting treatment of leases, namely that all leases with a term of more than a year should be capitalised. The effect of this approach is that all leases would be accounted for as finance leases, and therefore no off-balance-sheet financing in connection with lease contracts would appear in the financial statements (Fulbier *et al.*, 2008:122-123).

The proposed capitalisation of all operating leases would have an effect on both the total and current liabilities of companies that are currently reporting operating leases in the disclosure of their financial statements (Grossman & Grossman, 2010:6). This makes a study of this nature relevant in the business world of today. The effect of the proposed change of IAS 17 on financial ratios of companies engaging in leasing activities has to be investigated as this may affect the financial statements of companies in a greater way than was originally anticipated.

Research conducted in both the United States and Canada (Durocher, 2008:230) has shown that since accounting standards on the capitalisation of leases had been introduced to the accounting world, management of companies has constructed their lease contracts in such a way that they have much less finance leases in comparison to operating leases, hence avoiding the capitalisation of the lease liability. The main reason for doing this is to avoid the consequential debt that is shown in the Statement of Financial Position and the negative effect it may have on incentives for managers. Evidence collected more recently shows that managers will still enter into contracts with shorter lease periods to avoid the capitalisation of the lease (Beattie, Goodacre & Thomson, 2006:79).

The users of financial statements, also referred to as the stakeholders, primarily include investors, employees, lenders, suppliers, customers, governments and the general public (IASB, 2009a:19). Users of the financial statements consider the effect of operating leases in their interpretation of the financial statements because

of the impact it has on the financial risk the users are exposed to due to the lease contracts that must be completed (Beattie, 2000:1186; Imhoff, Lipe & Wright, 1993:342; Ely, 1995:397). Therefore, when these users analyse financial statements by calculating financial ratios, the impact of operating leases are considered.

In this study, the main focus will be on the impact the capitalising of long-term operating leases may have on the figures disclosed in the financial statements by the companies; more specifically, on the financial ratios interpreted by the users of the financial statements. In a case study performed in the United States, it was stated that the capitalising of long-term operating leases has a positive effect on some of the profitability indicators, but it has an unfavourable effect on debt and return ratios such as return-on-assets and debt-to-equity ratios (Bryan *et al.*, 2010:39). This will make the company appear to be a more risky investment.

In contrast, research conducted in Canada indicated the opposite results when operating leases are capitalised. In this study, the researchers concluded that the effects of capitalising operating leases should not be overstated, because there is no clear evidence that it has a significant effect on any performance metrics or any indicators used to determine the value of companies (Fulbier *et al.*, 2008:122). It has to be noted that these studies may not have made the same assumptions when performing the studies and both studies had limitations that were not considered when the research was performed.

1.1.2 Motivation of topic actuality

The current IAS for leases, IAS 17, allows companies to classify their lease contracts either as financial leases or operating leases. Many companies have a number of disclosed long-term operating lease contracts that will most probably have an effect on the debt and equity financial ratios of companies if indeed they were accounted for as financial leases (Imhoff *et al.*, 1993:336).

As mentioned previously, the IASB and the FASB are currently conducting a joint project, G4 + 1. The objective of this project is to develop a new standard for lease accounting to ensure that the liabilities and assets that arise from lease contracts are included in the reported figures and are not just disclosed in the notes to the financial statements. The IASB is of the opinion that the new accounting standard will give

rise to more reliable information regarding companies' debt to equity and it will minimise the effect of off-balance-sheet financing (IASB, 2010).

An exposure draft on leases (ED/2010/9) was released in August 2010 for comments to be received by 15 December 2010 and the target date for the new IFRS standard to be released is in 2012. The effective date of the new standard has yet to be confirmed (IASB, 2010). The reason for the prolonged process is because there are many factors to consider before an accounting standard can be changed. According to Schipper (1994:63), the standard-setting process is conducted in such a way that it identifies three types of evidence that standard setters look out for or consider before changing or setting a standard. They consider:

- What effect will the suggested standard have on the financial statement figures as they are currently reported?
- What effect it will have on the management of companies?
- How will it affect the decisions of the users of the financial statements?

The effect of different accounting treatments for leases and financing has an impact on the decisions lenders make and the credit evaluations performed by them. It was found that lenders' decisions are affected by the actual level of leverage, i.e. debt to equity, and not by the way that companies account for leases in their financial statements (Wilkins & Zimmer, 1983a:751; Wilkins & Zimmer, 1983b:65).

The South African government has recently implemented a new credit act, the National Credit Act No. 34 of 2005 (South Africa, 2005:1). The effect of long-term operating lease capitalisation on the requirements of the new act must be investigated to conclude whether companies will be able to undertake loans to expand their business and future growth that is critical in the current unstable economic environment of South Africa. Companies' financial statements serve as an evaluation tool in order to make a conclusion as to whether companies are financially sound in order to obtain debt financing.

1.1.3 Previous research

Some of the previous research performed on the effect that capitalising long-term operating leases will have on financial ratios of companies in other countries, include studies performed by Grossman and Grossman (2010), Durocher (2008), Fulbier *et al.* (2008) and Beattie, Goodacre and Thomson (2006).

The prescribed accounting treatment for lease capitalisation in IAS 17 has in the past shown that companies prefer lease contracts to be classified as operating leases rather than finance leases. This is due to the impact that the different classification methods have on the reported figures in the financial statements and therefore on the key financial ratios such as the debt-to-equity ratios and profitability ratios used by the stakeholders of companies (Beattie *et al.*, 2006:81).

Financial ratios serve as performance indicators as well as multiples that are used to value companies (Fulbier *et al.*, 2008:124). There has not yet been much research conducted on the effect that the proposed change will have on the financial ratios of *South African* companies, especially companies listed on the JSE.

It can therefore be concluded that this topic is very relevant in the South African economic environment, as the proposed change and the effective date of the new accounting standard are in the near future and the effect thereof on South African companies listed on the JSE may be substantial.

This study serves as an *enhancement* to the study performed by Fulbier *et al.* (2008). This study is also the first study of this nature in South Africa.

1.2 PROBLEM STATEMENT

As mentioned before, companies prefer lease contracts to be classified as operating leases rather than finance leases. The question that arises is, what impact does the capitalisation of long-term operating leases have on the financial ratios interpreted by users of the financial statements, more directly, the stakeholders of JSE listed companies? Therefore, the primary question that needs to be asked is:

- Does the capitalisation of long-term operating leases have an effect on the key financial ratios that stakeholders use to interpret a company's financial performance?

1.3 RESEARCH OBJECTIVES

The main objective of this study is to determine what effect the capitalising of long-term operating leases will have on the financial ratios of JSE-listed companies in South Africa.

The main objective will be achieved by the following secondary objectives:

- Investigating the difference, if any, between the current accounting standard on accounting for leases, IAS 17, and the proposed new standard by the IASB from the perspective of the lessee;
- Identifying the key line items on the financial statements that are affected by the proposed change in accounting treatment for long-term operating leases by the lessee;
- Identifying key financial ratios used by the financial statement users to interpret financial statements of companies in the different industry sectors listed on the JSE;
- Determining the effect of the capitalisation of operating leases on the identified financial ratios;
- Formulating recommendations as to whether the proposed new accounting treatment of long-term operating lease contracts will lead to a better universal understanding of the financial implications of long-term operating lease contracts.

1.4 RESEARCH METHODOLOGY

To achieve the above objectives, a thorough literature review with an empirical study will be conducted.

1.4.1 Literature review

The literature review will be based on published academic literature both nationally and internationally. This will be performed to obtain a thorough understanding of the current and proposed accounting treatment of long-term operating leases as well as to identify key financial ratios to be used by the stakeholders to interpret financial statements.

The literature review aims to achieve the following:

- Understanding the accounting treatment of the current and the proposed new treatment for long-term operating leases by the lessee;
- Identifying the key line items on the financial statements that will be affected by the new proposed standard on accounting for long-term operating leases;
- Identifying the key financial ratios stakeholders use to interpret the financial statements;
- Dividing the financial ratios into different categories such as:
 - i. ratios that indicate a *structural change* in the way the company is financed;
 - ii. ratios that indicate a change in *profitability*; and
 - iii. ratios that are used to *value* companies, and to obtain an understanding of what each of the ratios mean and the effect it has on the decisions made by users of the financial statements.

1.4.2 Empirical research

The empirical study will be performed by selecting the Top 40 companies listed on the JSE. The criteria used for the selection of the companies will be the market capitalisation of the companies for 2010, as this will be the most recent and applicable information. The 2011 financial year will not be included in the sample, due to the fact that many companies have not yet finalised the financial statements for the financial year ending 2011.

The companies will be divided according to each JSE industry sector, namely financials, resources and industrials (Anon, 2011b:1), before any adjustments for the capitalisation of operating leases, i.e. therefore by using the published financial statements of the companies. The financial statements will then be adjusted accordingly to the information available on operating lease contracts for the companies in each of the industry sectors, thus capitalising the long-term operating leases. The same financial ratios will be calculated again by using the adjusted figures. The results will be interpreted and compared to the results calculated before adjusting the financial statements to determine if the capitalisation of long-term operating leases has an effect on key financial ratios used by stakeholders to interpret the financial performance of a company.

1.5 TERMS OF REFERENCE

Lease: Involves an agreement where one party owns an asset and another party enjoys the use thereof for an agreed period at a predetermined payment (IASB, 2009b:1200-1203).

Lessee: Enjoys the use of an asset owned by the lessor for a series of payments (IASB, 2009b:1200-1203).

Lessor: Owns an asset, but conveys the right of use of the asset to the lessee (IASB, 2009b:1200-1203).

Lease term: The non-cancellable period stipulated in the lease contract (IASB, 2009b:1200-1203).

Effective interest rate method: A method used to calculate the amortised cost of an asset or liability to allocate the interest income and interest expense over the period (IASB, 2009c:2074).

1.6 OVERVIEW

This study will be conducted in six chapters as follows:

Chapter 1: Introduction

The first chapter of this study is a summary of the background of the study as well as providing the research objectives and the planned method of research to be used in the study. The terms of reference were stated evidently.

Chapter 2: Accounting for leases

This chapter will contain a literature review of the accounting standards on leases, as well as the difference between the current accounting standard on accounting for long-term operating leases and the proposed new accounting treatment for long-term operating leases from the perspective of the lessee. The specific line items on the financial statements that will be affected by the proposed changes will also be identified.

Chapter 3: Financial ratios

In this chapter, the financial ratios used by the users of financial statements to interpret the financial statements will be identified. The aim is to gain a better understanding of the information provided and the assumptions that can be made when interpreting the financial ratios.

Chapter 4: Research methodology

Chapter 4 will discuss the research methodology as well as the mathematical methods used.

Chapter 5: Empirical study

In Chapter 5, the sampling method of the companies used in the study will be reported. The financial ratios calculated, before adjustment for long-term operating lease capitalisation and after adjustment for long-term operating lease capitalisation, will be studied and the results will be reported.

Chapter 6: Conclusions and recommendations

The conclusions made based on the results of the literature review and the empirical study will be discussed. Recommendations from the study will then be provided.

1.7 SUMMARY

In this chapter the reader was introduced to the study and a motivation of the topic actuality was provided. The problem statement, relating research objectives and the research methodology that will be followed to meet these objectives, were discussed. A short summary of the terms of reference used in this study followed and the chapter concluded with an overview of the chapters the study consists of.

CHAPTER 2

2 ACCOUNTING FOR LEASES

2.1 INTRODUCTION

This chapter aims to meet two of the three secondary objectives as set out in Chapter 1 (par 1.3 p. 6). Firstly investigating the difference, if any, between the current accounting standard on accounting for leases, IAS 17, and the proposed new standard by the IASB from the perspective of the lessee and secondly, identifying the key line items on the financial statements that are affected by the proposed change in accounting treatment for long-term operating leases by the lessee.

This chapter consists of a discussion and comparison between the current accounting standard on operating leases and the proposed new accounting standard for leases in the financial records of the lessee. The specific line items in the financial statements that will be affected by this proposed change will be identified. Examples that will better explain the accounting treatment of leases in general will also be utilised and illustrated to ensure that a clear understanding of the difference between the current and proposed new accounting standards will be obtained.

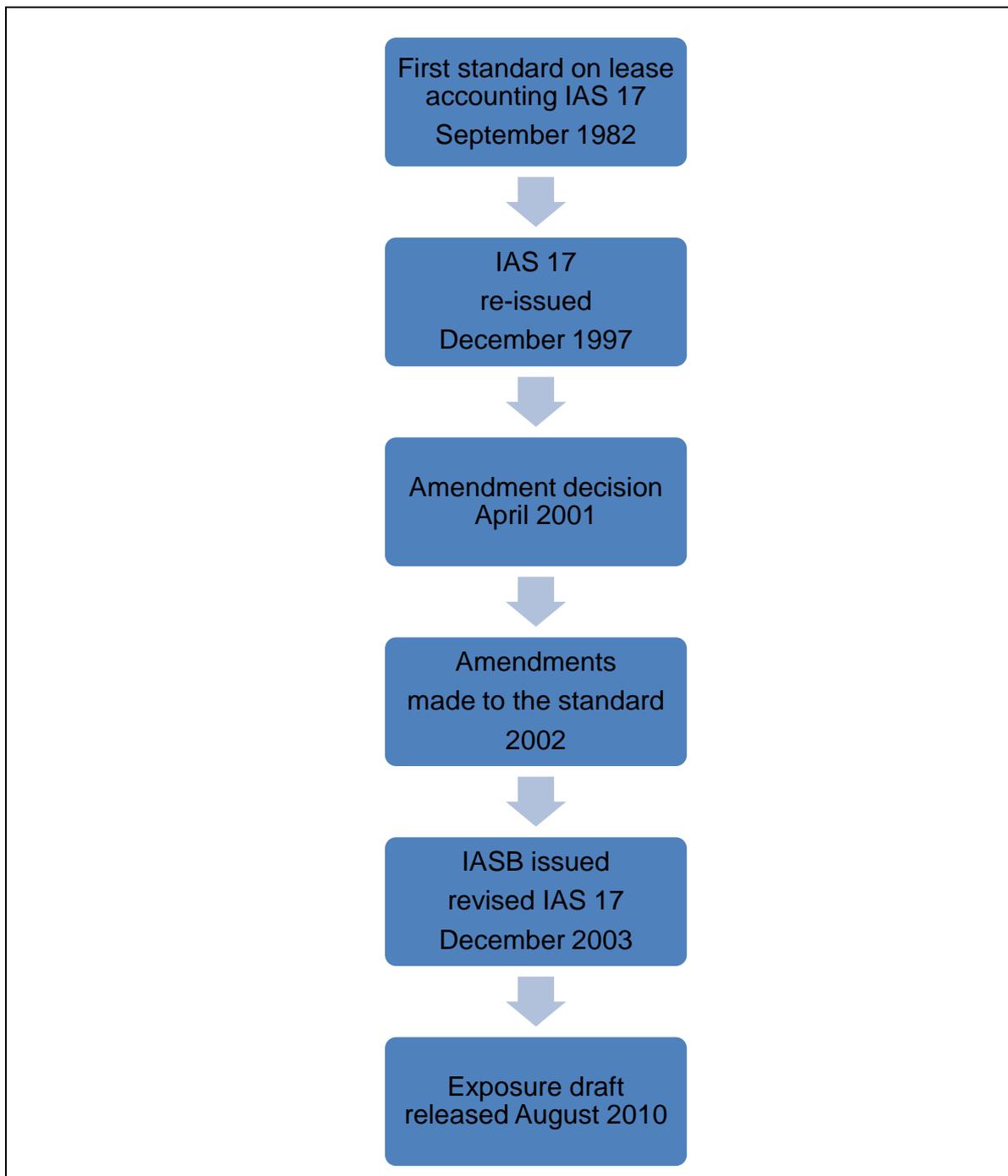
Some of the other issues to be considered in this chapter include the taxation effects of the current and the proposed change in the accounting treatment of operating leases, the method of transition if indeed the proposed standard becomes effective and the impact of the proposed accounting standard on business, internal controls and Information Technology (IT) systems within a company.

2.2 BACKGROUND ON IAS FOR LEASES

The accounting treatment for lease contracts is performed in accordance with IAS 17. The first standard on lease accounting was issued during September 1982. IAS 17 was re-issued by the International Accounting Standards Committee (IASC) during December 1997. In April 2001, the IASB made a decision that all Standards and Interpretations to those standards that were issued under any previous constitutions are still applicable unless and until they are withdrawn or amended. A few amendments were made to the standard in 2002 (IASB, 2009b:1195). During

December 2003, the IASB issued a revised IAS 17 on accounting for leases, and this standard is still used to date to account for the lease activities of companies. The effective date of this new issued standard was 1 January 2005 (IASB, 2009b:1215). Figure 2.1 (p. 12) illustrates the development of IAS 17.

Figure 2.1: The development of IAS 17



Source: Author

All companies listed on the JSE must adhere to the listing requirements. The new JSE listing requirements came into effect on 1 September 2003. One of the new requirements is that companies must adopt IFRS in financial years starting on or after 1 January 2005. Other companies that report their financial information under another standard approved by the JSE, are required to perform a reconciliation to IFRS (Anon, 2004:1). It is therefore mandatory for a JSE-listed company to apply and interpret IFRS, of which IAS 17 forms part.

2.3 CURRENT IAS ON ACCOUNTING FOR LEASES

2.3.1 Definitions

The basic workings of a lease agreement can be explained as where one party owns an asset and another party enjoys the use thereof for an agreed period at a predetermined payment.

A **leasing contract** usually refers to two parties that are involved in this leasing activity. These parties are referred to as the **lessee** and the **lessor**. The method used by the lessee to account for leases differs substantially from the method used by the lessor. The proposals referred to in the recently released exposure draft (ED/2010/9) would, if it is implemented, result in a number of changes in the methods that lessees and lessors use to account for leasing activities (IASB, 2010:7). In this study, the main focus will be on the lessee. These changes can be found in a summary later in the study (par 2.5 p. 38).

The following definitions are also relevant to IAS 17 (IASB, 2009b:1200-1203):

- The ***inception*** of the lease is the earlier of the date of the lease agreement and the date the lessee and the lessor commit themselves to the provisions of the lease agreement.
- The ***commencement of the lease term*** is the date on which the lessee can exercise its right to use the asset.
- ***Minimum lease payments*** are the payments that the lessee is required to make over the lease term. These include any guaranteed residual values that may exist in the lease agreement.

- The **economic life** of an asset is the total number of years that the asset can be used.
- **Useful life** of an asset is the remaining number of years from the commencement of the lease term up to the end date that the company is expected to consume the economic benefits from the asset.
- The **guaranteed residual value** is a larger final instalment guaranteed by the lessee or a party related to the lessee.
- **Un-guaranteed residual value** is the large final instalment not guaranteed by the lessee or guaranteed by a party that is related to the lessor.
- **Implicit interest rate or rate implicit to the lease** is the discount rate used at the inception of the lease that causes the aggregate present value of the minimum lease payment and the un-guaranteed residual value to be equal to the sum of any initial direct cost paid by the lessor and the fair value of the asset. Example 2.2 can be studied for an illustration of the calculation of the implicit interest rate (p. 19).
- The **lessee's incremental borrowing rate** is the interest rate that the lessee has to pay on a similar lease, or it is the market-related interest rate.
- The **lease term** is the non-cancellable period stipulated in the lease contract.
- The **effective interest rate method** is defined by IAS 39, Financial Instruments, as a method used to calculate the amortised cost of an asset or liability to allocate the interest income and interest expense over the period (IASB, 2009c:2074). Refer to example 2.1 for an illustration of the working of the effective interest rate method (p. 15).

Example 2.1: Illustration of the working of the effective interest rate method

A financial instrument (loan) with a book value of R200 000 is re-payable in five annual equal instalments of R43 000. The interest rate and relevant interest payments can be calculated as follows, when the effective interest rate method is used on a financial calculator:

Present value (PV)	R200 000
Future value (FV)	0
Payments (PMT)	R43 000
Number of periods (N)	5
Compute (COMP) Interest (I)	2.46%

This calculation will then be used in an amortisation table to establish the interest and capital components of the payments. The interest component can either be calculated by i) multiplying the outstanding balance at the beginning of the period with the interest rate of 2.46%, or ii) using the amortisation function on the financial calculator to calculate each portion. If indeed the financial calculator is used, the interest component will be indicated by the definition interest (intr) and the capital component by the definition principle (princ). The amortisation table will now be illustrated in Table 2.1 (p. 15):

Table 2.1: Illustration of the working of the effective interest rate method in an amortisation table

PERIOD	BALANCE: BEGINNING OF PERIOD	PMT	INTR	PRINC	BALANCE: END OF THE PERIOD
	(R)	(R)	(R)	(R)	(R)
1	200 000	43 000	4 920	38 080	161 920
2	161 920	43 000	3 983	39 017	122 903
3	122 903	43 000	3 023	39 977	82 926
4	82 926	43 000	2 040	40 960	41 966
5	41 966	43 000	1 034	41 966	0

Source: Author

2.3.2 Classification between finance- and operating leases

A lease agreement can be classified into one of two forms. The first is an operating lease, where the asset in substance belongs to the lessor and the lessee enjoys the use thereof. Lease agreements can be structured as such that the lessee in essence does not really lease the asset, but instead the lessor transfers the risks and rewards incidental to the ownership of the asset to the lessee (IASB, 2009b:1203).

According to IAS 17 (IASB, 2009b:1203), the risks incidental to ownership of an asset may include:

- Losses from idle capacity;
- Technological obsolescence; and
- Changes and economic conditions.

IAS 17 also refers to rewards as the expectation of a profitable operation over the asset's economic life and a gain from appreciation in value or realisation of a residual value (IASB, 2009b:1203).

To classify a lease agreement into a finance lease or an operating lease depends on the substance of the transaction rather than the form of the lease contract (IASB, 2009b:1204). IAS 17 identifies five examples of situations where a lease is classified as a finance lease. This is also used as a criterion to determine if a lease agreement constitutes a finance lease or an operating lease. If one of the criteria applies, it is regarded that the risks and awards are transferred and the lease is therefore classified as a finance lease (IASB, 2009b:1204). These examples or criteria, as they are referred to, include (IASB, 2009b:1204):

- The lease agreement transfers ownership of the asset from the lessor to the lessee at the end of the lease term;
- The lease term is a major part of the economic life of the asset;
- The leased asset is of such a specialised nature that only the lessee is able to use the asset without major modifications to the asset;

- The lessee has the option to purchase the asset on the date that the option becomes available at a price that is lower than the fair value of the asset on the date that the option becomes available;
- At the inception of the lease, the present value of the minimum lease payments is equal to at least substantially all of the fair value of the asset.

When it is still uncertain if a lease agreement is a finance lease or an operating lease, the following additional criteria must be considered (IASB, 2009b:1204):

- Whether the lessee has the right to cancel the lease and the losses for the lessor associated with the cancellation of the lease are borne by the lessee;
or
- The lessee has the ability to continue the lease agreement for a second period at rent substantially lower than market rate.

If the agreement does not meet any of the above criteria, the lease agreement is classified as an operating lease. The accounting treatment of both financial- and operating lease contracts differs for lessees and lessors. In this study, the accounting treatment will be discussed only from the perspective of the lessee.

2.3.3 Accounting for leases in the financial statements of lessees

The lessee must classify the lease agreement either as a financial lease or an operating lease. In accounting, any standard or type of transaction is recognised in two stages, the first being initial measurement, followed by subsequent measurement. Initially, recognition refers to the accounting treatment on the date the transaction is recorded in the financial records for the first time. Subsequent measurement refers to the accounting treatment for all periods after the initial recognition. Each lease type will now be discussed.

2.3.3.1 Finance lease

Initial recognition

At the commencement of the lease term, an asset and the corresponding liability must be recognised at the lower of:

- The fair value of the asset; and
- The present value of the minimum lease payments.

The fair value is the value or the amount the asset could be bought for or sold between two willing parties in an active market (IASB, 2009b:1166). These amounts must be determined on the date of the inception of the lease. When calculating the present value of the minimum lease payments, the discount rate to be used is the rate implicit to lease. If the rate implicit to the lease (par 2.3.1 p.13) is not realistic, the lessee's incremental borrowing rate must be used (IASB, 2009b:1206). The guaranteed residual value is used as the future value (FV) when calculating the present value of the minimum lease payments.

The initial direct cost incurred by the lessee is added to the amount recognised as an asset, while the initial direct cost incurred by the lessor is added to the fair value of the asset when determining the rate implicit to the lease (IASB, 2009b:1206). Initial direct costs are costs that are incurred specifically in connection with the leasing agreement (IASB, 2009b:1202). Any guaranteed or un-guaranteed residual values (par 2.3.1 p. 13) in connection with the lease agreements must be included when determining the present value (PV) of the minimum lease payments (IASB, 2009b:1201).

Subsequent measurement

The finance lease asset that is recognised gives rise to a depreciation expense for the asset for each accounting period. The asset is depreciated in accordance with IAS 16, Property, Plant and Equipment and IAS 38, Intangible Assets. If it is not certain that the ownership of the asset will be transferred to the lessee at the end of the lease period, the asset must be depreciated over the shorter of the lease term and the useful life of the asset (IASB, 2009b:1207).

At the end of each accounting period, the minimum lease payments must be apportioned into finance charges and the capital amount of the liability as prepared in the amortisation table in example 2.2 (p. 19). The finance charges must be allocated to each period during the lease term to produce a constant interest rate on the outstanding capital balance of the liability. These finance charges shall be recognised as expenses, together with the rent payments, at the end of each period (IASB, 2009b:1207).

The following example can be studied to illustrate the above-mentioned rules set out in IAS 17 on accounting for finance leases in the financial statements of lessees:

Example 2.2: Illustration on accounting for finance leases in the financial statements of lessees, according to IAS 17

Entity X enters into a lease agreement with Entity Y to rent a machine. The fair value of the asset at the inception of the lease is R210 000. The following terms relate to the lease agreement:

	(R)
Rent payable in arrears per year	8 000
Guaranteed residual value	30 000
Un-guaranteed residual value	20 000
Initial direct cost paid by Entity X (Lessee)	6 000
Initial direct cost paid by Entity Y (Lessor)	4 000
Carrying amount of machine in the financial records of Entity Y	150 000
	YEARS
Remaining useful life of the asset for Entity Y	10
Economic useful life of the asset	6
Useful life	6
Lease term	5

The first step is to determine if the lease agreement is a finance lease or an operating lease. By using the criteria set out in IAS 17 (par. 2.3.2 p. 16), it can be concluded that the lease is a finance lease because the lease period is five of the six years of the economic life of the machine. Therefore, the lease period is a major part of the economic life of the asset.

Secondly, the rate implicit to the lease must be calculated, followed by the present value of the minimum lease payments. The implicit rate is calculated using the effective interest rate method, as indicated below. The description in brackets indicates the inputs into the financial calculator as well as the lease accounting terminology:

Present value (PV) = R210 000 (Fair value) +R4 000 (Initial direct cost of Entity Y)

Future value (FV) = R30 000 (Guaranteed residual value) +R20 000 (Un-guaranteed residual value) = R50 000

Number of periods (N) = 5 (Lease term)

Payment (PMT) = R8 000 (Rent payments)

Compute interest rate (COMP I) = 18.32% (Rate implicit to the lease)

The rate implicit to the lease is then 18.32%.

The present value of the minimum lease payments is calculated as follows, using the effective interest method:

Future value (FV) = R30 000 (Guaranteed residual value)

Number of periods (N) = 5 (Lease term)

Payment (PMT) = R8 000 (Rent payments)

Interest rate = 18.32% (Rate implicit to the lease)

Compute present value (COMP PV) =R37 774 (Present value of minimum lease payments)

It is therefore clear that the present value of the minimum lease payments is lower than the fair value of R210 000. The corresponding journal entry to the above transaction that must be recorded in the financial records of Entity X is as follows:

Dr. Finance lease asset	R37 774	
Cr. Finance lease liability		R37 774

The lease (rent) payment should be divided into a capital portion and an interest portion. An amortisation table or the amortisation function, as explained earlier in

example 2.1 (p. 15), can be used. The amortisation table and calculator inputs are illustrated below:

Table 2.2: Apportioning of payments into capital and interest components

PERIOD	BALANCE: BEGINNING OF PERIOD	PMT	INTR	PRINC	BALANCE: END OF THE PERIOD
	(R)	(R)	(R)	(R)	(R)
1	37 774	8 000	6 920	1 080	36 694
2	36 694	8 000	6 722	1 278	35 417
3	35 417	8 000	6 488	1 512	33 905
4	33 905	8 000	6 211	1 789	32 116
5	32 116	8 000	5 884	2 116	30 000

Interest (1 AMRT Intr) = R6 920

Capital component (1 AMRT Princ) = R1 080

Dr. Finance charges	R6 920	
Dr. Finance lease liability	R1 080	
Cr. Bank		R8 000

The depreciation expense arising from the leasing activity will be calculated over the shorter of the useful life and the lease term, because ownership of the machine will not be transferred to Entity X at the end of the lease period. Therefore, the asset will be depreciated over the lease term of five years. The initial direct cost paid by Entity X will be capitalised to the finance lease asset and will not be recognised as an expense.

The corresponding journal entry is as follows:

Dr. Finance lease asset	R6 000	
Cr. Bank		R6 000

$\begin{aligned} \text{Depreciation} &= \text{R}37\,774 + \text{R}6\,000 \text{ (Initial direct cost of Entity X)} \\ &= \text{R}43\,774 / 5 \text{ (Lease term)} = \text{R}8\,755 \end{aligned}$

Dr. Depreciation	R8 755	
Cr. Accumulated depreciation: Machine		R8 755

Source: Author

In this example, the initial and subsequent measurement of a finance lease from the perspective of the lessee was explained. The operating lease requirements in connection with IAS 17 will be discussed next.

2.3.3.2 Operating lease

According to IAS 17, lease payments made under an operating lease must be recognised as an expense on a straight-line basis over the lease term. The straight-line basis is known as lease smoothing (IASB, 2009b:1208).

If the above example was accounted for as an operating lease, the corresponding journal entry for each period over the lease term would be the following:

Dt. Rent expense	R8 000	
Cr. Bank		R8 000

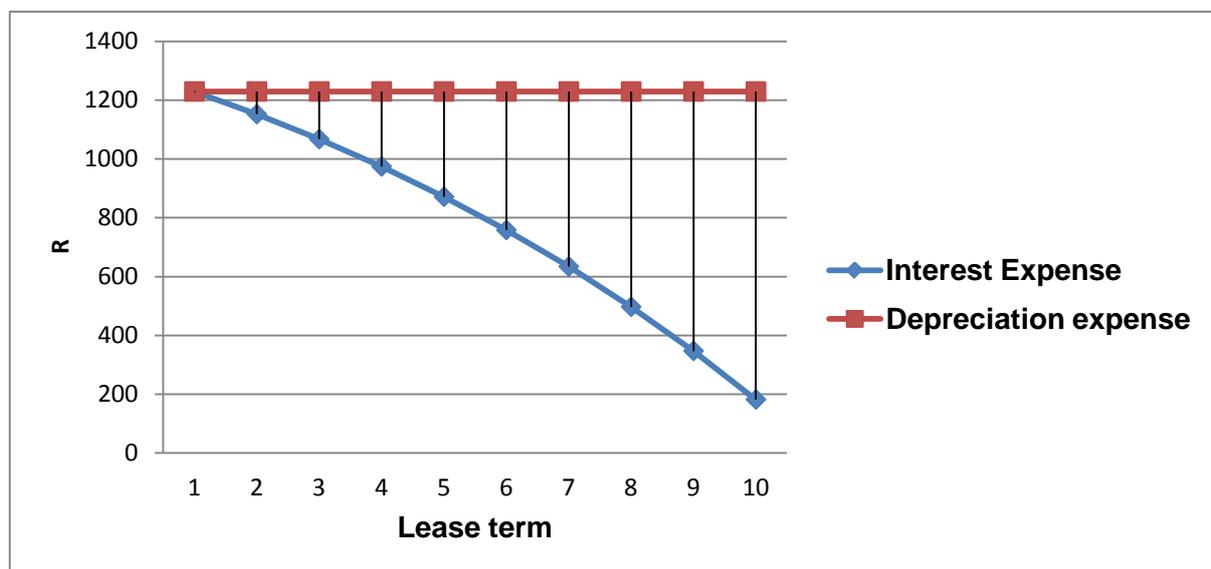
According to Lipe (2001:303), the total expenses recognised over the term of the lease are the same whether the lease is accounted for as a finance lease or an operating lease. The interest and depreciation expenses arising from finance lease accounting normally exceed the rent expense arising from accounting the lease as an operating lease. Lipe (2001:303) also made the statement that if a company's

leasing activities remain stable and any new lease contracts entered into are priced in line with old lease contracts, the expenses arising from performing finance lease and operating lease accounting are very similar (Lipe, 2001:303).

Operating lease agreements sometimes include lease incentives. Lease incentives are benefits that accrue to the lessee. These incentives may include, for example, a rent-free period. This rent-free period must form part of the lease term when calculating the lease payment (IASB, 2009c:2815). The disclosure of these incentives and rent-free periods is not required by IFRS (IASB, 2009c:2815).

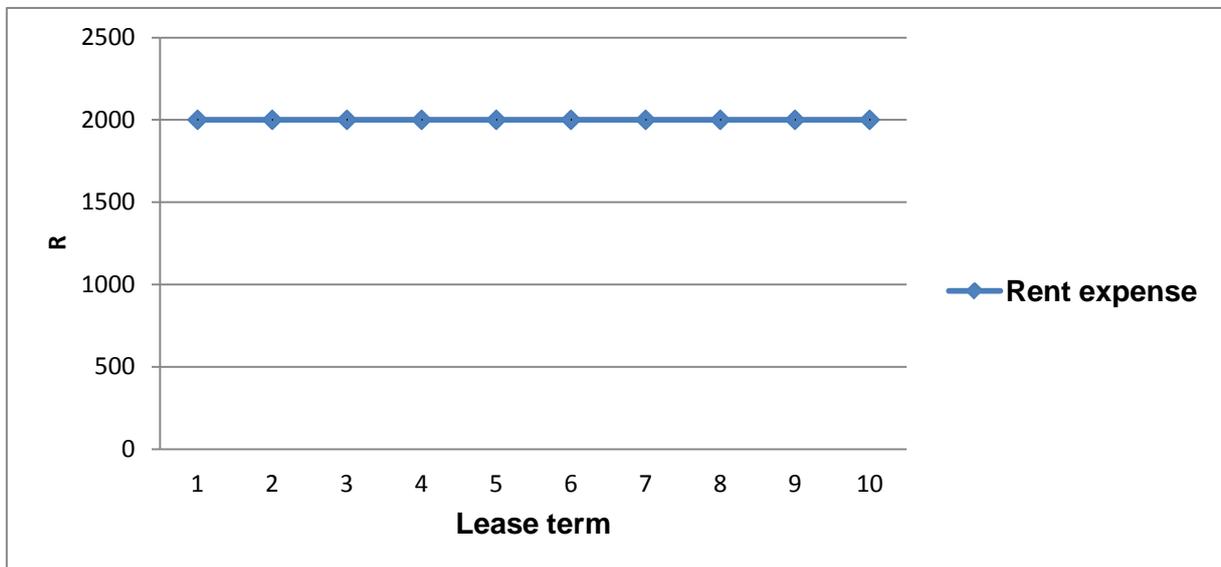
The following graphs show the effects of finance leases and operating leases on the Statement of Comprehensive Income as well as the Statement of Financial Position over the term of the lease. The graphs are based on a lease term of 10 years with no residual values or initial direct costs. Rent payments of R2 000 per year are payable in arrears. The rate implicit to the lease is 10% and there were no lease incentives agreed upon.

Graph 2.1: Effects on the Statement of Comprehensive Income during the lease period: Finance lease – IAS 17



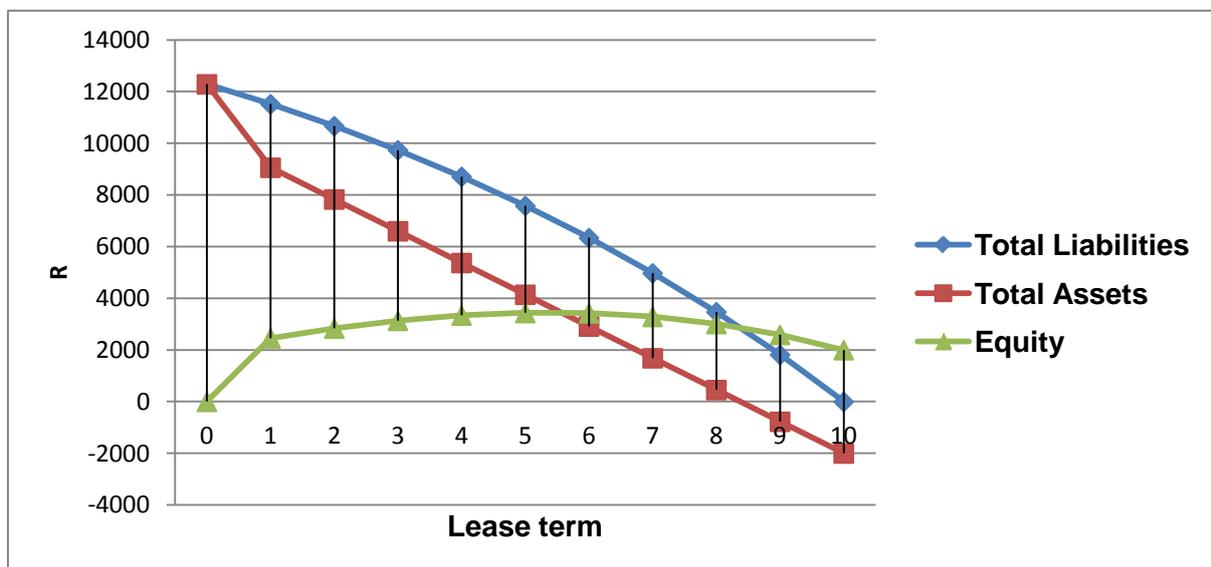
Source: Author

Graph 2.2: Effects on the Statement of Comprehensive Income during the lease period: Operating lease – IAS 17



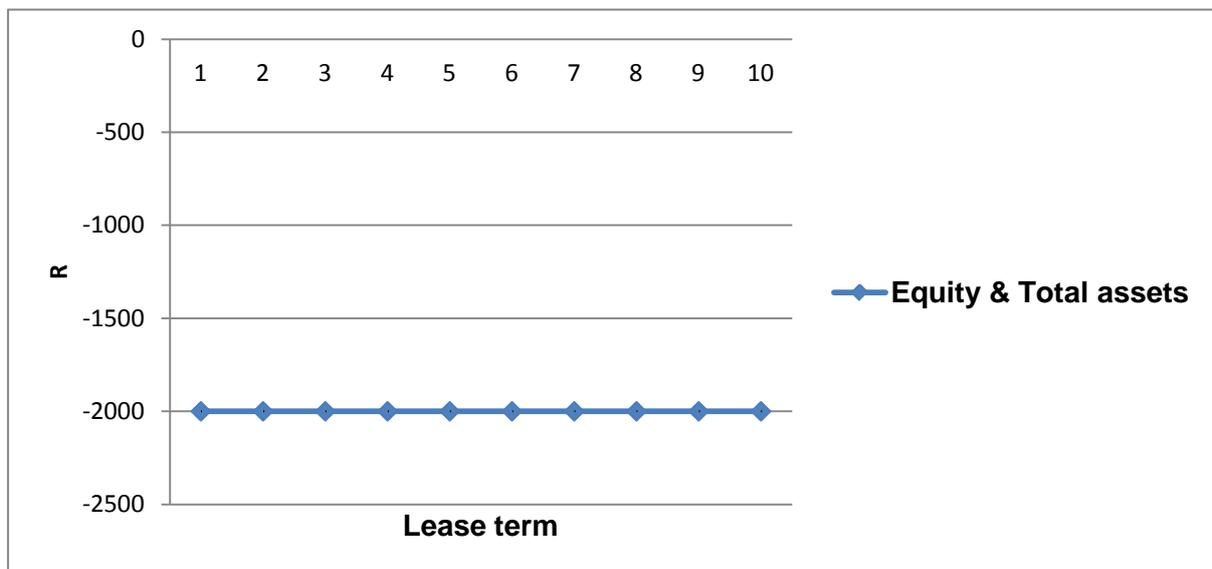
Source: Author

Graph 2.3: Effects on the Statement of Financial Position during the lease period: Finance lease – IAS 17



Source: Author

Graph 2.4: Effects on the Statement of Financial Position during the lease period: Operating lease – IAS 17



Source: Author

The taxation implications in connection with lease accounting will be discussed next.

2.3.4 Taxation implications

Normal rent payments are usually deductible from taxable income if it fits the criteria as set out in section 11(a) of the Income Taxation Act of South Africa. The lessee does not receive any capital allowances in connection with the leased asset, and no distinction is made between the capital amount and the interest amount as we do for accounting purposes. This does have an effect on the current tax payable by any entity (Vorster, Koornhof, Oberholster, Koppeschaar, Coetzee, Janse van Rensburg, Binnekade, Leith, Hattingh, & De Klerk, 2009:278).

For accounting purposes, deferred taxation implications arise when finance leases are capitalised. As a result of the recognition of a finance lease asset and liability, the tax base must be determined for both the asset and the liability. The tax base of the finance lease asset is the amount that will be deductible from taxable income in the future. The South African Revenue Service (SARS) does not recognise that an asset has been bought and therefore no capital allowances will be granted in the future, resulting in a tax base of zero for the finance lease asset. The tax base of the

finance lease liability will amount to the accounting carrying amount less the amount deductible from taxable income in the future. As the lessee is able to deduct the full instalment from taxable income, the tax base of the finance lease liability will amount to zero (Vorster *et al.*, 2009:278). It is of utmost importance to understand the tax implications of lease accounting as this may have a great impact on the decision to either lease an asset or to purchase the asset.

2.3.5 Key line items affected by the current standard on lease accounting

The key line items in the financial statements affected by the current accounting treatment for leases are summarised in Table 2.3 (p. 26). It is important to distinguish between these line items to determine the effect of the proposed change by the IASB.

Table 2.3: Summary of the line items affected by the current accounting standard on leases

LESSEE ACCOUNTING	
FINANCE LEASES	OPERATING LEASES
Statement of Comprehensive Income	Statement of Comprehensive Income
Finance charges	Rent expense
Depreciation	Current taxation
Current taxation	
Statement of Financial Position	Statement of Financial Position
Finance lease asset	Asset or liability as a result of lease smoothing
Finance lease liability	
Accumulated depreciation	Deferred taxation
Deferred taxation	

Source: Author

2.4 NEW PROPOSED ACCOUNTING TREATMENT ON LEASES

In section 2.3, the current accounting standard on lease accounting was discussed. In this section, the new proposed accounting treatment for lease accounting will be investigated.

2.4.1 The reason for the publishing of this exposure draft (ED/2010/9)

As previously stated, the accounting treatment of a company's leasing activities must be presented in the financial statements in order for the users of the financial statements to obtain a complete picture of the leasing activities of the company. The current accounting standard on leases does not meet this objective of complete and understandable disclosure of leasing activities within a company (IASB, 2010:5). Although the current accounting standard's treatment states the relevant information regarding the rights and obligations arising from the leasing contracts to meet the definitions of assets and liabilities in the framework, these accounting models still lead to a lack of comparability because of the distinction between operating leases and finance leases (IASB, 2010:5).

A new accounting standard was therefore developed to overcome the shortcomings of the current IAS 17. The new proposed accounting standard will ensure that the full effect of the leasing activities of a company is reflected in the financial statements of the parties entering into the lease agreement. The aim is also to represent true information regarding the timing, amounts and uncertainty of the cashflows that arise from leasing activities (IASB, 2010:5). The exposure draft (ED/2010/9) was therefore released in August 2010.

2.4.2 Definitions

Before any definitions are explained, it must be noted that some of the definitions relating to the terminology generally used in lease accounting may differ from the definitions as discussed in par 2.3.1 (p. 13), due to the proposed change in IAS 17.

For a better understanding of the new accounting standard on leases, the following definitions must be studied (IASB, 2010:39-40):

- A **lease** is a contract where the use of the underlying asset is transferred for a period in exchange for lease payments.
- The **underlying asset** is the asset for which the right of use is transferred in the lease contract.
- **Contingent rentals** are contractual rentals that arise because of a change in the circumstances after the date of commencement of the lease; for example, if rent payments are based on revenue generated, the amount above or below the payment stipulated in the leasing contract is seen as a contingent rental.
- The **commencement date of the lease** is the date on which the underlying asset is made available for use by the lessor.
- **Date of inception of the lease** is the earlier of the lease agreement date or the date that both the lessee and the lessor commit themselves to the lease contract.
- Cost incurred as a direct result of the lease agreement and that would not have been incurred if the lease agreement did not take place is known as **initial direct costs**.
- Payments that arise from the lease contract include fixed rentals and rentals subject to uncertainty; these also include, but are not limited to, contingent rentals, guaranteed residual values and term option penalties payable by the lessee. All of the above are included in **lease payments**.
- The **lease term** is the *longest term*, more likely than not, that the lessee is going to lease the underlying asset.
- **Lessee's incremental borrowing rate** is the rate on the date of the inception of the lease the lessee would borrow at for a similar term to purchase a similar underlying asset considering that the same security is provided.
- The **residual value guarantee** is the guarantee that the lessee made that the fair value of the underlying asset will be a specific amount when returned to the

lessor. If the guaranteed amount is higher than the fair value on that date, the lessee must pay the difference to the lessor.

- A **right-of-use asset** is an asset that represents the right to use or control the use of a specific asset, as stipulated in the lease contract.

2.4.3 Accounting for leases in the financial statements of the lessee

When a lessee enters into a lease agreement with the lessor, the lessee must, on the date of commencement of the lease, recognise a right-of-use asset as well as a liability to make lease payments (IASB, 2010:19). This serves as the **initial recognition** of the lease contract in the financial records of the lessee.

Initial recognition

Initially, both the right-of-use asset and the liability to make lease payments must be measured at the inception of the lease. The liability to make lease payments will be measured at the present value of the lease payments. The discount rate to be used in calculating the present value of lease payments is the lessee's incremental borrowing rate. When calculating the present value of lease payments, the following must be included (IASB, 2010:20):

- An estimation of any contingent rentals payable by the lessee;
- Any residual value guarantees payable by the lessee, while any residual values guaranteed by a third party will not be included; and
- An estimate of any term option penalties payable to the lessor.

The right-of-use asset will be recognised at the same value as the liability to make lease payments. Any direct cost incurred by the lessee will be capitalised to the carrying amount of the right-of-use asset on the date of the inception of the lease (IASB, 2010:19).

The new proposed method to determine the lease term differs drastically from the current IAS 17 method. According to the exposure draft (ED/2010/9) (IASB, 2010:20), the most probable lease term must be estimated by including any renewal and cancellation options. The lease term is defined as the longest possible term that is more likely than not to occur and this gives rise to the fact that the company will have to attach probabilities to each term to calculate the longest

possible term that is more likely than not (IASB, 2010:47). Example 2.3 (p. 30) can be studied to illustrate the calculation of the lease term.

Example 2.3: Illustration on calculation of the lease term according to the exposure draft (ED/2010/9)

Entity X enters into a lease agreement with Entity Y. The following conditions were set out in the lease agreement in connection with the lease term:

- Non-cancellable lease term of 20 years with a 30 percent probability;
- An option to renew the lease term at the end of 20 years for an additional 10 years with a 40 percent probability;
- An option to renew the lease term at the end of 30 years for an additional five years with a 30 percent probability.

When applying the definition of a lease term, as stated in the exposure draft, the longest possible term will be 30 years, because there is only a 30 percent probability that the lease term will be 20 years and only a 30 percent probability that the lease term will be 35 years, but there is a 70 percent probability that the lease term will exceed 20 years.

Source: Author

Subsequent measurement

The subsequent measurement of the right-of-use asset and the liability to make lease payments differs. The liability to make lease payments will be subsequently measured by using the effective interest rate method, thus dividing the lease instalments into a capital and interest portion over the lease term. When using the effective interest rate method, the following must be taken into account on each reporting date by the lessee (IASB, 2010:21):

- Any change in the circumstances that indicate that the liability to make lease payments differ from prior periods due to a change in the lease term;
- If any such circumstances exist, the lessee must:
 - i. re-evaluate the lease term;
 - ii. adjust the corresponding right-of-use asset so as to correspond with the change in the liability; and
 - iii. re-evaluate the amount of any contingent rentals, lease term option penalties or any guaranteed residual values.

To account for the changes in the liability to make lease payments, the lessee must distinguish between i) contingent rentals, ii) lease term option penalties and iii) guaranteed residual values for both prior and current periods as well as for future periods. If the change in the expected lease payments is due to any changes in connection with the current or prior periods, the lessee must record the change in the profit or loss section of the Statement of Comprehensive Income. Any change in lease payments in connection with future periods must be accounted for as an adjustment to the right-of-use asset; for example, if the lease payments depend on the revenue of a company in any prior periods or the current period, the lessee must record the change in the profit or loss section of the Statement of Comprehensive Income. When the change took place because of a change in any future sales, the right-of-use asset must be adjusted (IASB, 2010:21).

When calculating these changes that must be made to the right-of-use asset and/or the liability to make lease payments, the lessee will not use a different rate than the initial incremental borrowing rate used at the initial measurement, except to illustrate any changes in the reference interest rate used at contingent rentals. Any such change because of a change in the reference interest rates will be recorded in the profit or loss section of the Statement of Comprehensive Income (IASB, 2010:21).

The subsequent measurement of the right-of-use asset is performed according to the exposure draft (ED/2010/09) as follows:

- The right-of-use asset must be carried at amortised cost, thus amortising the asset on a systematic basis as from the date of the commencement of the lease;

- the term to be used for amortisation will be the shorter of the lease term and the useful life of the underlying asset; and
- the selection of the amortisation method has to be done in accordance with IAS 38: Intangible Assets (IASB, 2010:22).

The lessee will also be able to revalue the right-of-use asset to its fair value less any amortisation and impairment losses recorded after the date of the revaluation (IASB, 2010:22). The fair value must be estimated with reference to an active market. Any revaluation gains or losses will be accounted for in the Statement of Comprehensive Income in accordance with IAS 38. At the end of the reporting period, the lessee must evaluate if the right-of-use asset has undergone any impairment by applying the principles of IAS 36: Impairment of Assets. Any impairment losses will be accounted for with regard to the principles as stated in IAS 36 (IASB, 2010:22). Example 2.4 (p. 32) can be studied to illustrate the effect of the proposed change for accounting for leases from the perspective of the lessee.

Example 2.4: Illustration of the effect of the proposed change on accounting for leases from the perspective of the lessee

Entity X enters into a lease agreement with Entity Y. Lease payments of R15 000 are payable per year for each year the machine is leased from Entity Y. Entity X has just finalised their negotiations with ABC Bank to borrow funds to buy a similar asset. ABC Bank agreed to an interest rate of 12% per annum on the loan agreement.

The lease contract with Entity Y stipulates that Entity X must lease the machine for a minimum period of 10 years. Entity X then has the option to extend the lease term for a further five years after the ten-year lease term is completed and yet another extension after the 15 years for another five years. Ownership of the asset will never be transferred to Entity X. The useful life of the asset is 12 years. No residual values of contingent rentals were agreed upon. Entity X paid initial direct costs of R2 000 in connection with contract fees relating to the lease agreement.

The first step is to determine the lease term. Entity X attached the following probabilities to each of the extension options included in the contract:

- Non-cancellable term of 10 years 40%
- Extension of five years after the 10 year period 30%
- Extension of five years after the 15 year period 30%

By applying the definition of the lease term, as set out in exposure draft (ED/2010/9), it can be concluded that the lease term is 15 years, as there is a 60% probability that the lease term will be longer than 10 years and only a 30% probability that the lease term will be 20 years. The lease term is the shorter of the lease term and the useful life of the asset. It can therefore be concluded that the lease term for accounting purposes is 12 years.

The next step is to calculate the present value of the lease payments by making use of the effective interest rate method. The description in brackets indicates the inputs into the financial calculator as well as the lease accounting terminology:

Future value (FV) = 0 (No residual values)
Number of periods (N) = 12 (Lease term)
Payment (PMT) = 15 000 (Rent payments)
Interest rate (I) = 12% (Incremental borrowing rate)
Compute present value (COMP PV) = 92 916 (Present value of the lease payments)

The corresponding journal entry on the initial recognition of the lease in the financial records of Entity X will be as follows:

Dr. Right-of-use asset	R92 916	
Cr. Liability to make lease payments		R92 916

The initial direct cost incurred by Entity X must be capitalised to the right-of-use asset and not recognised as an expense in the Statement of Comprehensive Income. The corresponding journal entry will be as follows:

Dr. Right-of-use asset	R2 000	
Cr. Bank		R2 000

Assuming that no changes have taken place in the circumstances at year-end, the apportioning of the lease liability into capital and finance charges will be performed with a corresponding journal entry. Firstly, an amortisation table or the amortisation function can be used to determine the capital to interest portions, as explained earlier (p. 15). The amortisation table and calculator inputs are illustrated below:

Table 2.4: Apportioning of payments into capital and interest components

PERIOD	BALANCE – BEGINNING OF PERIOD	PMT	INTR	PRINC	BALANCE – END OF THE PERIOD
	(R)	(R)	(R)	(R)	(R)
1	92 916	15 000	11 150	3 850	89 065
2	89 065	15 000	10 688	4 312	84 753
3	84 753	15 000	10 170	4 829	79 924
4	79 924	15 000	9 591	5 409	74 515
5	74 515	15 000	8 942	6 058	68 456
6	68 456	15 000	8 215	6 785	61 671
7	61 671	15 000	7 401	7 599	54 072
8	54 072	15 000	6 489	8 511	45 560
9	45 560	15 000	5 467	9 533	36 027
10	36 027	15 000	4 323	10 676	25 351
11	25 351	15 000	3 040	11 960	13 393
12	13 393	15 000	1 607	13 393	0

Interest (1 AMRT Intr) = R11 150

Capital component (1 AMRT Princ) = R3 850

The corresponding journal entry is as follows:

Dr. Finance charges	R11 150	
Dr. Liability to make lease payments	R3 850	
Cr. Bank		R15 000

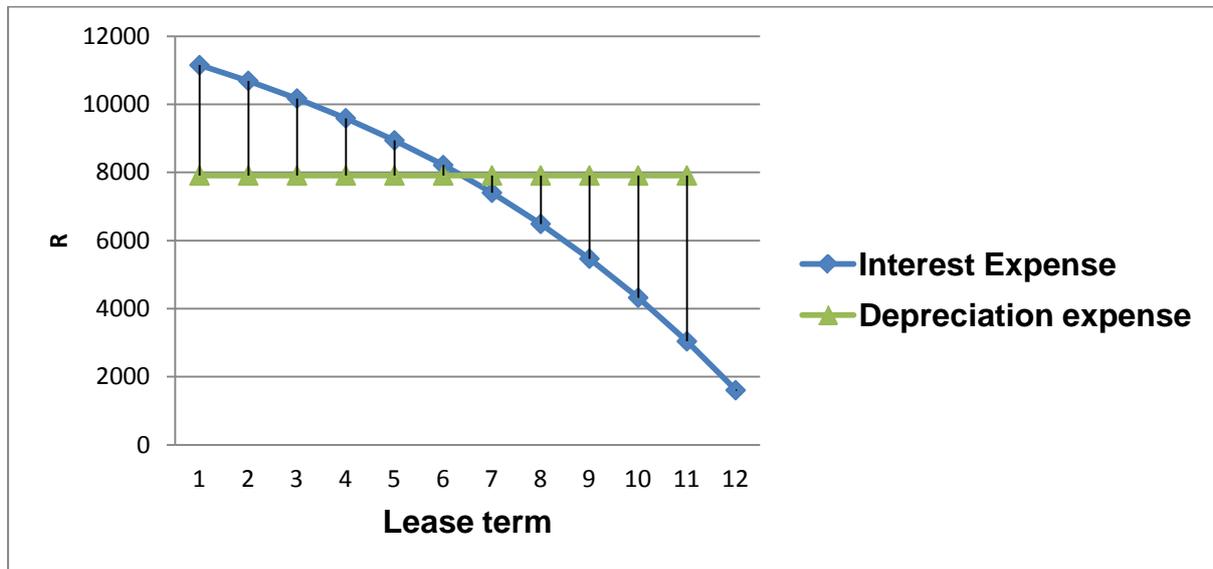
The right-of-use asset must then be amortised over the lease term according to the criteria set out in IAS 38. Assuming that no revaluations are made to these specific classes of assets, according to IAS 16, and that no indicators of impairment exist, as described in IAS 36, the amortisation to be recognised each year will be accounted for as follows:

$$\text{Amortisation} = \text{R92 916} + \text{R2 000} = \text{R94 916} / 12 \text{ (Lease term)} = \text{R7 910}$$

Dr. Amortisation	R7 910	
Cr. Accumulated amortisation		R7 910

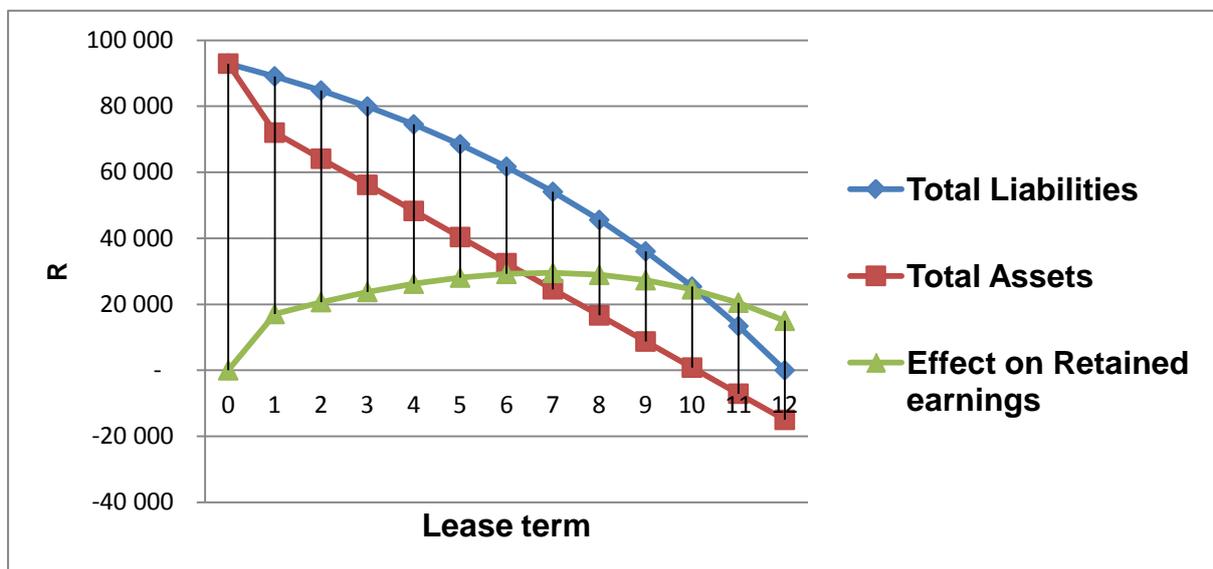
The following graphs illustrate the effect that the new proposed accounting standard will have on the Statement of Comprehensive Income as well as the Statement of Financial Position. The graphs are based on the above example:

Graph 2.5: Effects on the Statement of Comprehensive Income during the lease period: Application of the exposure draft (ED/2010/9)



Source: Author

Graph 2.6: Effects on the Statement of Financial Position during the lease period: Application of the exposure draft (ED/2010/9)



Source: Author

2.4.4 Taxation implications

Any rental payments are usually deductible from taxable income when section 11(a) of the Income Tax Act of South Africa is applied (Vorster *et al.*, 2009:278). The proposed change in accounting for leases may have an impact on the following (PWC, 2009):

- The deductibility of withholding taxes;
- Fast-tracked capital deductions received by companies on capital assets bought;
- Transfer pricing arrangements; and
- Value added tax (VAT) implications.

If we consider the taxation implications from an accounting perspective, an asset and a liability are recognised (Vorster *et al.*, 2009:278). Deferred tax will arise because of the right-of-use asset and the liability to make lease payments that is recognised, as SARS does not recognise that the lessee bought an asset. As the effect on assets as well as liabilities are exactly the same in both the application of IAS 17 and the proposed change by the IASB, it can therefore be concluded that deferred taxation implications will remain the same with the exception that there is no impairment recognised according to IAS 36 or any revaluations performed according to IAS 16.

2.4.5 Key line items affected by the new proposed accounting treatment

The key line items in the financial statements that will be affected by the proposed change in lease accounting from the perspective of the lessee are as follows, if considering that there is now impairment recognised according to IAS 36 or any revaluations performed according to IAS 16:

Table 2.5: Key line items affected by the proposed change of IAS 17

LESSEE ACCOUNTING	
Statement of Comprehensive Income	Statement of Financial Position
Finance charges	Right-of-use asset
Amortisation	Liability to make lease payments
Current taxation	Accumulated amortisation
	Deferred taxation

Source: Author

Previously discussed in this chapter (par 2.3 p. 13 & par 2.4 p. 27) were the current and the proposed accounting standards on leases. A summary of the differences and similarities follows in Table 2.6 (p. 39).

2.5 DIFFERENCES BETWEEN THE ACCOUNTING STANDARDS

One of the secondary research objectives set out in Chapter 1 (par 1.3 p. 6) is to identify the differences between the current IAS 17 and the new proposed accounting standard on operating leases. Table 2.6 (p. 39) includes a summary of these differences.

Table 2.6: Summary of differences and similarities between the current and proposed accounting standard for lease accounting

LESSEE ACCOUNTING	
CURRENT ACCOUNTING STANDARD – IAS 17	NEW PROPOSED ACCOUNTING STANDARD – EXPOSURE DRAFT (ED/2010/9)
Initial recognition	Initial recognition
<ul style="list-style-type: none"> At the commencement of the lease term, the lessee must determine if the lease contract constitutes a finance lease or an operating lease (IASB, 2009b:1206). 	<ul style="list-style-type: none"> At the commencement of the lease term, the lessee does not distinguish between a financial lease or an operating lease, as no such distinction is required by the new proposed accounting treatment (IASB, 2010).
<ul style="list-style-type: none"> If the contract constitutes a finance lease, the corresponding accounting treatment must be followed. 	<ul style="list-style-type: none"> No requirement.
<ul style="list-style-type: none"> At commencement of the lease term, the lessee must recognise a finance lease asset and a corresponding finance lease liability at the lower of the fair value of the asset and the present value of the minimum lease payments (IASB, 2009b:1206). 	<ul style="list-style-type: none"> At commencement of the lease term, the lessee must recognise a right-of-use asset and a liability to make lease payments at the present value of the lease payments (IASB, 2010:19).

Table 2.6: Summary of differences and similarities between the current and proposed accounting standard for lease accounting (continued)

Initial measurement	Initial measurement
<ul style="list-style-type: none"> • The present value of the lease payments is calculated by using the rate implicit to the lease. If the rate implicit to the lease cannot be calculated, the lessee's incremental borrowing rate must be used (IASB, 2009b:1206). • The lease term to be used is the non-cancellable lease term specified in the lease contract (IASB, 2009b:2101). 	<ul style="list-style-type: none"> • The present value of the lease payments is calculated by using the lessee's incremental borrowing rate (IASB, 2010:20). • The lease term to be used is the longest term, more likely than not, that the lessee is going to lease the underlying asset (IASB, 2010:40).
<ul style="list-style-type: none"> • Initial direct cost incurred by the lessee is capitalised to the asset and not recognised as an expense (IASB, 2009b:1206). 	<ul style="list-style-type: none"> • Initial direct cost incurred by the lessee is capitalised to the right-of-use asset and not recognised as an expense (IASB, 2010:19).

Table 2.6: Summary of differences and similarities between the current and proposed accounting standard for lease accounting (continued)

Subsequent measurement	Subsequent measurement
Finance lease liability	Liability to make lease payments
<ul style="list-style-type: none"> • Lease payments are apportioned into a finance charge as well as a capital portion over the lease term by making use of the effective interest rate method (IASB, 2009b:1207). • No requirement. 	<ul style="list-style-type: none"> • Lease payments are apportioned into a finance charge as well as a capital portion over the lease term by making use of the effective interest rate method (IASB, 2010:21). • When using the effective interest rate method the lessee must take into account any changes in the lease term and account for any changes in the liability to make lease payments either by adjusting the right-of-use asset or to record the change in profit or loss (IASB, 2010:21).
<ul style="list-style-type: none"> • No requirement. • No requirement. 	<ul style="list-style-type: none"> • Any changes in contingent rentals, term option penalties and guaranteed residual values must also be taken into account when using the effective interest rate method (IASB, 2010:21). • The rate to be used to calculate the changes in the liability to make lease payments is the initial rate used when the present value of the lease payments was calculated except where the change was due to a change in the reference rate that was used to calculate contingent rentals. Any such change will be recorded in the profit or loss section of the Statement of Comprehensive Income (IASB, 2010:21).

Table 2.6: Summary of differences and similarities between the current and proposed accounting standard for lease accounting (continued)

Finance lease asset	Right-of-use asset
<ul style="list-style-type: none"> • The finance lease asset is depreciated over a certain term in accordance with IAS 16 and IAS 38. The term to be used will depend on whether the ownership of the asset is transferred from the lessor to the lessee at the end of the lease term (IASB, 2009b:1207). • If ownership of the asset is transferred at the end of the lease term, the term to be used for depreciation purposes is the lease term; if ownership is not transferred, the shorter of the lease term and the useful life of the asset is used (IASB, 2009b:1207). 	<ul style="list-style-type: none"> • The right-of-use asset is carried at amortised cost in accordance with IAS 38. The term to be used to calculate the amortisation for each year is the shorter of the lease term and the useful life of the asset (IASB, 2010:22). • No requirement.
<ul style="list-style-type: none"> • No requirement. 	<ul style="list-style-type: none"> • The right-of-use asset can also be re-valued in accordance with IAS 16 and has to be tested for impairment according to IAS 36 (IASB, 2010:22).
<ul style="list-style-type: none"> • If indeed the lease contract was classified as an operating lease, the lessee will recognise a rent expense in profit or loss every year on a straight line basis (IASB, 2009b:1208). 	<ul style="list-style-type: none"> • No operating lease will be recognised as there will be no distinction between a finance lease and operating lease of any sort (IASB, 2010).

Source: Author

2.6 PROPOSED TRANSITION TO NEW ACCOUNTING STANDARD

On the date of the initial application of the proposed standard, the lessee will have to recognise a liability to make lease payments as well as a right-of-use asset for the outstanding lease contracts. The initial application date will be the first comparative year disclosed in the financial statements in which the company decides to recognise their lease contracts in accordance with the new standard (EY, 2010).

2.7 THE IMPACT ON INTERNAL COMPANY PROCESSES

According to research conducted by the audit firm, PriceWaterhouseCoopers, the lessee will need to reassess whether leasing of an asset is a better option than buying the specific asset when the new accounting standard becomes effective. The new accounting standard proposes a number of changes in the accounting treatment for leases, and therefore the lessee will probably have to contemplate the rearrangement of existing and future contracts in respect of i) the lease term, ii) options to renew the lease contracts, and iii) other terms specified in the lease contract (PWC, 2009).

Other business and legal arrangements will probably need to be re-evaluated to determine if these arrangements will still be operational. If not, changes to the business structures and legal arrangements may be necessary. The internal control system of a company may be impacted and may result in vast capital expenditure to be incurred. The internal control system and processes will have to be remodelled to guarantee the effective accounting treatment of all leasing activities (PWC, 2009).

The existing information technology (IT) and lease accounting structures were originally based on the current concept of risk and rewards. Due to the proposed recognition of a right-of-use asset, this concept will need to be changed to reflect the proposed change in lease accounting. One of the proposed changes to be implemented is proper contract administration systems to ensure the proper accounting and control of all lease agreements (PWC, 2009).

2.8 SUMMARY

In this chapter, consideration was given to the background and history of the development of the current IAS 17 as well as the difference between the current accounting standard on leases and the proposed new accounting standard developed by the IASB to account for operating leases in the financial records of the lessee.

The line items affected by this proposed change were identified (par 2.3.5 p. 26 & par. 2.4.5 p. 37). A comparison was performed between the current and proposed accounting treatment in respect of i) recognition, ii) initial measurement, and iii) subsequent measurement in the financial records of the lessee (par 2.5 p. 38).

It was found that there are significant differences between these two approaches on the treatment of operating leases from an accounting perspective. The effect of these differences on certain financial ratios will be illustrated later in the research study. The financial ratios to be considered will be identified according to the line items affected and will be discussed in further detail in the following chapter.

CHAPTER 3

3 FINANCIAL RATIOS

3.1 INTRODUCTION

Financial ratio analysis is used by the financial statement users to make certain assumptions about a company's performance and financial stability (Al-Ajmi, 2008:107; Etter, Lippincott & Reck, 2006:146; Horrigan, 1965:558). In Chapter 2 (par 2.3.5 p. 26 & par 2.4.5 p. 37), the key line items that are affected by the proposed change of IAS 17 were identified. In this chapter, the secondary objectives set in Chapter 1 (par 1.3 p. 6) will be addressed further by identifying key financial ratios used by the financial statement users to interpret financial statements of companies.

The aim is to link the line items in the financial statements affected by the proposed change of IAS 17 to the relevant financial ratios. Consideration will also be given to the information that shareholders may obtain from financial ratio analysis.

3.2 BACKGROUND AND OBJECTIVES OF FINANCIAL RATIO ANALYSIS

Financial ratio analysis was developed in the 1920s in the United States. The main reason for this development was to use these financial ratios as a tool to evaluate the short-term credibility of companies by examining their financial statements (Al-Ajmi, 2008:107; Horrigan, 1965:558).

Evaluating a company by means of financial ratio analysis provides useful information that could be utilised for decision-making. Financial ratios are mostly based on information and figures resulting from the past activities of a company. The emphasis is therefore placed on the relationship between figures in the financial statements and the interpretation of these figures (Koen & Oberholzer, 1999:3).

Financial ratio analysis has been used in general to measure the financial strength of a company by comparing company ratios to other company ratios in the same industry. Financial ratio analysis is used for a variety of reasons in today's economic environment and depends on the needs of the users of the financial information.

The needs of financial statement users can be summarised as follows (Al-Ajmi, 2008:107; Halkos & Salamouris, 2004:203; Koen & Oberholzer, 1999:4-5):

- Determining if a company is maximising its shareholders wealth;
- Determining if a company will be able to pay its interest and capital obligations in connection with long-term debt;
- Determining if a company will be able to adhere to its short-term obligations by way of liquid assets;
- Establishing whether the investor obtained a yield on the investment;
- Valuation of companies by means of certain valuation models; and
- For the identification of any reasons and areas where the company is currently not performing as it should be.

Research conducted by Gallizo, Jimenez and Salvador (2002:185) indicates that one of the main uses for financial ratio analysis is to predict if a company is going to be bankrupt in the near future. According to Correia, Flynn, Uliana and Wormald (2011:5-5), the aim of financial statement analysis by means of financial ratios is to evaluate a company's financial position and the returns the investors receive in relation to the risk they are exposed to. Stakeholders and users of financial statements will most probably use this information to reach conclusions on the future potential of a company (Koen & Oberholzer, 1999:3).

One of the great advantages of using financial ratio analysis to make investment decisions is that companies of different sizes can be compared by using financial ratios. By using ratios to compare companies of different sizes, the problem that arose due to differences in company size will automatically be cancelled out. The reason is because the ratios provide percentages and multiples that can be compared (Firer, Ross, Westerfield & Jordan, 2004:57). The specific users of financial ratio analysis and their specific needs will be discussed next.

3.3 USERS OF FINANCIAL RATIO ANALYSIS AND THEIR NEEDS

Users of financial ratios have specific objectives and needs when evaluating, for example, their investment in a company. Due to this fact, the users of financial ratios must be divided into different categories according to their information needs (Correia *et al.*, 2011:5-5).

The first and probably the most renowned user of financial ratio information is the **equity investor** of a company. Equity investors supply the company with the capital needed in the form of buying shares in a company. The investment in these shares exposes the investor to all the rewards and risks of ownership. It can therefore be concluded that the equity investor provides the risk capital in a company (Correia *et al.*, 2011:5-6). The equity investor will be mostly concerned about the return on their investments and the ability of the entity to pay dividends (Al-Ajmi, 2008:107; Koen & Oberholzer, 1999:6).

Providers of credit use financial ratio analysis to determine whether a company will be able to meet the interest and capital obligations on credit granted to them. Credit providers can be divided into short-term and long-term credit providers with different information needs. Short-term credit providers, such as the creditors of a company, will usually provide this credit without charging any interest on the credit provided. The direct sale of the goods of the company provides the company with enough compensation for providing credit. Long-term credit providers usually include financial institutions that provide loans to companies that are payable in fixed instalments, which include an interest component. This interest component is the reward the credit provider receives for the risk he is taking in providing the credit. If indeed a company is not able to make these interest payments, it is an indicator that the credit provider may be at risk of not recovering its investment in the company. This risk that the credit provider is exposed to, will influence his information needs when he analyses a company by means of financial ratios (Correia *et al.*, 2011:5-7; Al-Ajmi, 2008:107; Koen & Oberholzer, 1999:7).

Another party that uses financial ratios as an evaluation method is the **management** of a company. The main objective of the financial management department of a company is to maximise the shareholder's wealth (Ogilvie, 2009:4). This can mainly

be achieved by a manner of proper control by management. Proper control will help management to allocate its resources in such a way that the shareholder's wealth will be maximised. Financial analysis must be performed frequently by management to identify weaknesses and problems in the company and to rectify these problems and weaknesses on a timely basis. This is feasible because management has no restrictions on access to financial information of the company (Correia *et al.*, 2011:5-7).

Financial ratio analysis is also used by company analysts for valuation purposes. A common financial ratio, like the price-earnings ratio, is used in the price earnings valuation model. The financial ratios assist specialists in identifying possible merger and acquisition opportunities by way of evaluating companies and adding any possible synergies that will arise if indeed companies are taken over or merged (Correia *et al.*, 2011:5-7). Other parties that are also interested in the results of financial ratio analysis are **auditors** and the **South African Revenue Service (SARS)**, to confirm the rationality behind the tax returns submitted (Correia *et al.*, 2011:5-8). The financial ratios that are used in this study are discussed in the next section.

3.4 FINANCIAL RATIOS

As mentioned in Chapter 2 (par 2.3.5 p. 26 & par 2.4.5 p. 37), the proposed change of IAS 17 to account for operating leases affects a number of line items in the financial statements. The line items that are affected will have a direct impact on certain financial ratios, as indicated by Fulbier *et al.* (2008:128), since these financial ratios are calculated using the line items that are affected.

According to Fulbier *et al.* (2008:128), financial ratios can be divided into three broad categories that will provide a summary of the overall financial position of a company. These categories include the following:

- ratios that indicate the structural change within a company;
- ratios that indicate the profitability of a company; and
- ratios that have an impact on the valuation of companies from a market perspective.

These different categories of financial ratios will satisfy the different information needs of the users of financial ratio information, as discussed in paragraph 3.3 (p. 47).

Correia *et al.* (2011:5-30) highlights that the proposed change in accounting for leases will have an effect on a number of figures in the financial statements, such as total debt, equity and return ratios. The financial ratios are discussed next according to Fulbier's broad categories.

3.4.1 Financial ratios indicating structural change within a company

Structural change implies a change between debt and equity financing of a company. Previous research performed showed that the financial ratios that indicate the structural change in a company's financing activities, measure the financial and operating risk of the company (Fulbier *et al.*, 2008:128).

The financial ratio that specifically indicates the structural change in the financing activities of a company is the debt-to-equity ratio. It provides the user of the financial ratio with the following information, as discussed in Table 3.1 (p. 49). Other financial ratio indicators of financial risk and solvency of a company that may be affected by the proposed change in accounting for leases are also discussed in Table 3.1 (Correia *et al.*, 2011:5-16; Vigarío, 2008:238; Nadarajah & Kotz, 2007:995).

Table 3.1: Financial ratios that indicate structural change in financing activities of a company

RATIO	FORMULA	INFORMATION PROVIDED
Debt to equity	$\frac{\text{Total Debt}}{\text{Total Equity}}$	<ul style="list-style-type: none"> This ratio highlights the degree that debt is covered by equity funds, thus indicating the financial risk that the company is exposed to.

Table 3.1: Financial ratios that indicate structural change in financing activities of a company (continued)

RATIO	FORMULA	INFORMATION PROVIDED
Debt ratio	$\frac{\text{Total Debt}}{\text{Total Assets}}$	<ul style="list-style-type: none"> The total debt ratio indicates the percentage of assets that is funded by debt, thereby indicating the financial risk since the company's assets should be able to cover the debt of the company. The debt ratio therefore indicates if indeed the assets of the company are sold, the debt relating to these assets can be paid off.
Interest cover	$\frac{\text{EBIT}^*}{\text{Interest Paid}}$ <p>*EBIT – Earnings before interest and taxation.</p>	<ul style="list-style-type: none"> This ratio indicates the company's ability to meet the obligation of interest payments. Interest cover also indicates the degree to which earnings can decrease before the company will not be able to make the interest payments. It is important for the company to be able to make these payments because any failure to do so can result in solvency and legal complications.

Source: Author

3.4.2 Financial ratios that indicate the profitability of a company

The new proposed standard on leases will have an effect on the profitability of a company due to the recognition of a liability to make lease payments that result in the recognition of an interest expense. The recognition of the right-of-use asset will also have an impact on the reported profit of a company when any impairment losses are recognised according to IAS 36: Impairment of Assets, and any amortisation is recognised according to IAS 38: Intangible Assets (IASB, 2010:20-22).

Some companies have divisions that are set up as profit centres. The managers of these profit centres are evaluated on the basis of the profit they produce by making use of financial ratios that indicate profitability (Anon, 2009a:460). Changes in these ratios will affect management behaviour and decisions made by management in connection with management incentive schemes as well as compensation plans. Profitability changes will also affect the ratios that are used in the valuation of companies from a market perspective (Fulbier *et al.*, 2008:128).

The profitability ratios discussed in Table 3.2 (p. 52) can be considered to indicate the effect the proposed change in accounting for leases will have on the profitability of a company (Correia *et al.*, 2011:5-16; De Andres, Landajo & Lorca, 2009:8956; Vigario 2008:238; Cinca, Molinero & Gallizo Larraz, 2005:40).

Table 3.2: Financial ratios that indicate profitability

RATIO	FORMULA	INFORMATION PROVIDED
Net profit percentage	$\frac{\text{Net profit for the period}}{\text{Revenue}}$	<ul style="list-style-type: none">• The net profit percentage indicates net profit as a percentage of revenue.• This ratio will be affected depending on how assets are financed. Equity finance will have no effect on the net profit, whereas debt financing will affect the net profit by means of interest paid. Due to the proposed accounting for leases, an asset will effectively be bought and financed through debt, thereby having a subsequent effect on net profit.

Table 3.2: Financial ratios that indicate profitability (continued)

<p>Return on equity</p>	$\frac{\text{Net Profit}}{\text{Total Equity}}$	<ul style="list-style-type: none"> • Return on equity indicates the return that shareholders will receive on their funds invested in the company. • A decrease in the return that equity investors receive may lead to the equity investor seeking alternative investment opportunities that yield a better return on their capital investment.
<p>Return on assets</p>	$\frac{\text{Net Profit}}{\text{Total Assets}}$	<ul style="list-style-type: none"> • The return-on-assets ratio measures the company's profit in total relative to the total assets employed. • This ratio indicates how much profit is generated by utilising the assets of the company. • Net profit after tax and interest is used because the interest and tax implications of the proposed accounting standard on leases will be taken into account in calculating other changes in ratios such as interest cover.

Source: Author

The evaluations of companies are affected directly by certain profitability ratios and certain ratios that indicate structural change within a company. The effects on the financial ratios used to value companies from a market perspective will now be discussed.

3.4.3 Financial ratios impacting valuation of companies from a market perspective

One of the models used in practice to evaluate a company from a market perspective, is the price earnings valuation model. This model uses the price-earnings ratio of a company to determine a value for the company by dividing the market price per share by the earnings per share (Correia *et al.*, 2011:6-19; Al-Ajmi, 2008:109). To evaluate the effect of changes in the valuation ratios from a market perspective, it is necessary to assume that market prices of shares will remain unchanged due to the complexity of market price prediction. As previously stated, any changes in the profitability of a company will affect the ratios used to evaluate a company (par 3.4.2 p. 51). It can therefore be expected that management behaviour will be in line with the effect that any changes in the profitability of the company will cause, because management performance is evaluated based on profit earned (Fulbier *et al.*, 2008:128).

It can therefore be concluded that the two financial ratios that may be affected by the proposed change in accounting for leases are the earnings-per-share ratio and the price-earnings ratio, because earnings will change as interest expenses and amortisation are recognised and, consequently, also the price-earnings ratio of the company (Ogilvie, 2008:227). These ratios provide the following information that can be used to value companies by using the price earnings valuation model (Correia *et al.*, 2011:5-20; Gowthorpe, 2009:437; Ogilvie, 2009:227).

Table 3.3: Financial ratios used in valuation models from a market perspective

RATIO	FORMULA	INFORMATION PROVIDED
Earnings per share	$\frac{\text{Earnings}^*}{\text{WNOS}^*}$ <p>* Earnings = Net Profit – Preference dividends</p> <p>* WNOS = Weighted number of ordinary shares</p>	<ul style="list-style-type: none"> • This ratio is used as a measure of performance. Due to the importance of this ratio, companies are also required to disclose its earnings per share according to IAS 33: Earnings per share (IASB, 2009b:1715).
Price-earnings ratio	$\frac{\text{Market Price}}{\text{Earnings per share}}$	<ul style="list-style-type: none"> • This formula indicates the amount that investors are prepared to pay per rand of disclosed profits. • Firms that are regarded as risky usually have a lower price earnings, thereby affecting the decision of investors.

Source: Author

The proposed change of IAS 17 will have an effect on a number of line items, as indicated in Chapter 2 (par 2.3.5 p. 26 & par 2.4.5 p. 37). These line items will affect certain financial ratios as discussed in this chapter. A summary on the financial ratios affected follows.

3.5 SUMMARY

The main objective of this chapter was to identify some financial ratios affected by the proposed change in IAS 17. These financial ratios were identified on the basis of the effect the proposed change of IAS 17 will have on the line items in the financial statements that are used to calculate these financial ratios. As the line items in the financial statements change, the resulting financial ratios will also change.

One of the goals of financial ratio analysis is to provide information to the users of financial statements. Fulbier *et al.* (2008:128) classify financial ratios into three broad categories, namely i) financial ratios that indicate structural change within a company, ii) financial ratios that indicate profitability of a company, and iii) financial ratios that are used for valuation purposes from a market perspective. These three categories provide the users of these ratios with three different types of information that may form part of their information needs.

As discussed in paragraph 3.3 (p. 47), financial ratios provide users of financial statements with information about the company that they use to make decisions regarding investments and whether they yield a high enough return on their investment in correlation with the amount of risk they are exposed to because of the activities the company is engaged in. The possible change due to the proposed change of IAS 17 in these ratios may provide a better reflection of the information provided by these ratios. The findings of the effect of the proposed change of IAS 17 by the IASB will be identified and discussed in Chapter 5 (par 5.3 p. 76).

CHAPTER 4

4 RESEARCH METHODOLOGY

4.1 INTRODUCTION

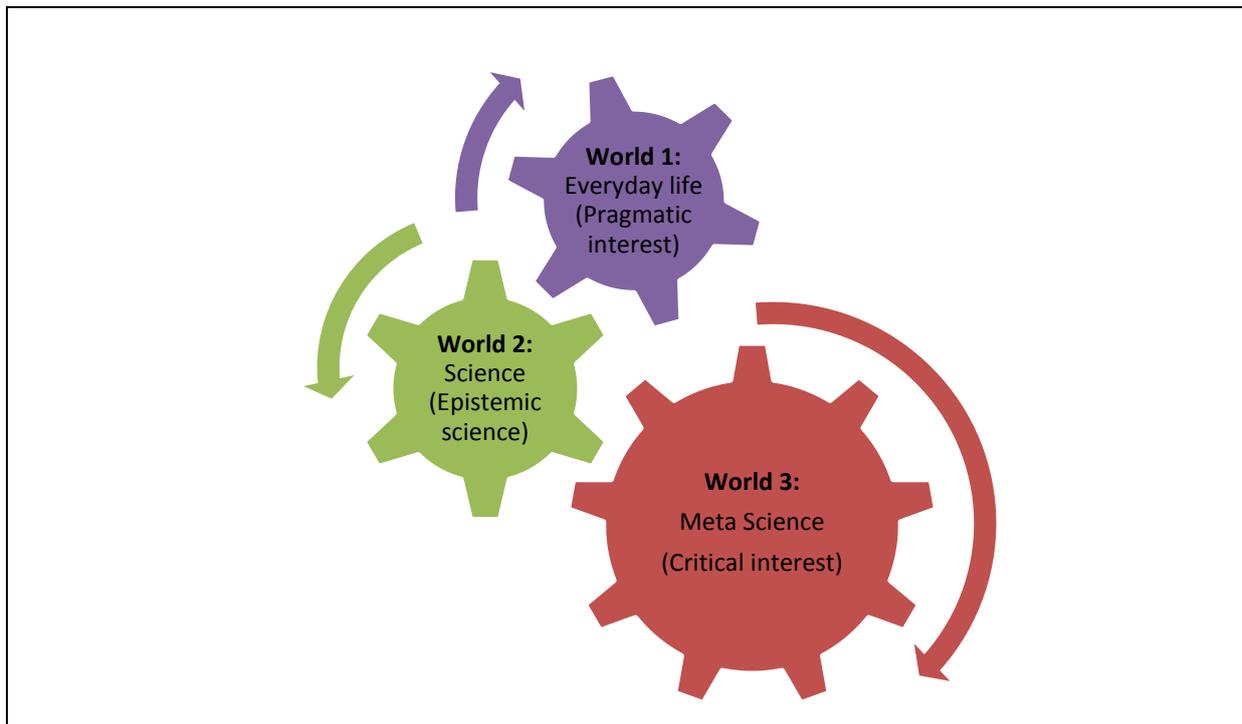
The purpose of this chapter is to provide an understanding of the research methodology applied in the study. The research design was developed to answer the research questions formulated in Chapter 1 (par 1.3 p. 6). Included in this chapter is a basic explanation of relevant definitions in conducting research, as well as how the sample was selected, and how the relevant data was obtained and analysed.

Research methodology is defined by Henning, Van Rensburg and Smit (2009:36) as a process that not only includes a group of methods, but also what the worth is to the study by using a specific method and the reason for using the method. According to Adams, Khan, Reaside and White (2009:25), the methodology of research is what is behind all research in respect of philosophy and science. It can therefore be concluded that research methodology is a process that is being undertaken within the context of a fixed frame of approaches by using processes that are reliable and valid. According to Tan (2008:25), a **research design** is a strategy for analysing and understanding the events of the proposed research conducted. The research design is therefore a blueprint or framework for conducting the research.

4.2 THEORETICAL PARADIGMS WITHIN SOCIAL SCIENCE

The main objective of this study is to investigate the effect the proposed change of the current IAS 17 will have on the financial ratios identified in Chapter 3. The IASB is of the opinion that the current IAS 17 gives rise to off-balance-sheet financing. This study may further serve as an evaluation of the reasoning behind the proposed change by the IASB in accounting for operating leases. In order to meet these objectives, it is important to shed light on the research approach used in this study by distinguishing between the levels of examination from a scientific perspective. Figure 4.1 (p. 58) illustrates the “Three Worlds Framework” that can be utilised to illustrate the methodological differences between different research approaches within the social science world and the interlocking between them.

Figure 4.1: Three Worlds Framework of methodological research approaches in social science



Adapted from: Mouton, 2009:139-141; Van der Schyf, 2008:5; Babbie & Mouton, 2001:15

World 1 illustrates the pragmatic interest such as social and physical reality and the lay of knowledge that we use to perform our everyday tasks. In this study, it refers to the problem that exists in the interpretation of accounting standards. **World 2** includes the epistemic interests, such as scientific knowledge and research in which the World 1 occurrences are selected followed by turning these occurrences into objectives of enquiry. World 2 portrays the knowledge of the concepts of accounting standards such as IAS 17 on the one hand, while on the other hand, **World 3** includes the development of accounting theories such as off-balance-sheet financing. World 3 signifies the critical interest that reflects the science and scientific research by focusing on the causes and reasons for certain actions (Mouton, 2009:138; Van der Schyf, 2008:5).

After consideration of this framework, it can be concluded that the research approach of this study falls into all three worlds. The first being World 1, where the current IAS 17 and the proposed change in IAS 17 must be understood and interpreted correctly, followed by World 2 that indicates the knowledge of the concepts of the current and the proposed IAS 17. Furthermore, World 3 represents the theory of off-balance-sheet financing that is a direct effect of the current accounting standard on accounting for leases. According to Carson, Golmore, Perry and Gronhaug (2009:153) and Levy (2006:373), the theoretical framework in which this study falls is the interpretive paradigm as it permits the research to be an understanding of what is happening in a certain milieu.

4.3 TYPES OF RESEARCH

Research can be divided into three different types, according to Durrheim (2006:44). These categories include:

- Exploratory, descriptive and explanatory research;
- Quantitative and qualitative research; and
- Applied and basic research.

The three categories will be discussed next.

4.3.1 Exploratory, descriptive and explanatory research

The purpose of an exploratory study is to develop a hypothesis or questions to be researched further. This type of research leans towards loose structures with the objective of discovering areas for future research (Cooper & Schindler, 2008:146). Descriptive research aims to define a subject for a group of problems by creating a profile for these problems. This type of study involves obtaining data and investigating the distribution and number of times a single characteristic is observed by the researcher (Blumberg, 2008:10, Brynard & Hanekom, 2008:7-8). The observations made in a descriptive study are explained beyond the description by performing an explanatory study (Blumberg, 2008:11). A descriptive study was performed during this research process.

4.3.2 Quantitative and qualitative research

Maree (2010:145) defines quantitative research as a method of using numerical data obtained from a sample in a population to generalise the results to the field that is being explored. Adams *et al.* (2009:26) conclude that quantitative research contains characteristics of quantitative width, thus performing statistical analysis. Undertaking quantitative research can therefore be defined as drawing a conclusion based upon evidence obtained by data and statistical analysis.

On the other hand, qualitative research is research that yields evocative data. It is obtained by the researcher's experiences and perceptions that were put in writing. Qualitative research does not usually include any numeric specifications or models (Brynard & Hanekom, 2010:37). Adams *et al.* (2009:26) contemplated that quantitative research portrays characteristics such as Social Interacting, Phenomenology and Hermeneutics. Qualitative research can therefore be summarised as exploring issues, understanding phenomena and answering questions.

In this study, a **quantitative** analysis is performed to illustrate the effect on the financial ratios, if indeed the proposed IAS 17 is implemented.

4.3.3 Applied and basic research

Basic research findings are usually used to enhance our knowledge of the world we are living in. The findings of an applied study will have a direct application, thus aiming to enhance decision-making, policy analysis, and problem-solving (Durrheim, 2006:45). It can therefore be concluded that the distinction between basic and applied research refers to what the findings will be used for; either enhancing general knowledge or applying the result directly. In this study, the research that is conducted may be seen as **applied** research, because the findings of the effect of the proposed change in IAS 17 on financial ratios may be used in decision-making of investors and policy decisions with regard to leasing as a source of finance.

4.4 RESEARCH SAMPLE COLLECTION

Brynard and Hanekom (2010:54) defined **sampling** as a method to select a small group out of a large population in order to reach a conclusion about the whole population. According to Tan (2008:87), sampling refers to a technique of selecting sub-sections from a whole population. A **population** consists of any well-defined set of elements or characteristics (Adams *et al.*, 2009:96; Brynard *et al.*, 2010:55). It is important that a sample is representative of the population.

A number of sampling selection techniques may be used to select a sample from a population. These sampling techniques can be divided into two groups, the first being probability sampling followed by non-probability sampling. Probability sampling is where each of the elements in the population has an equal chance to be included in the sample, whereas non-probability sampling conveys the opposite (Adams *et al.*, 2009:87-90).

In this study, non-probability sampling is used as every element in the sample does not have an equal chance of being selected. One of the sub-sections of non-probability sampling is quota sampling. Quota sampling can be described as a sampling method where relevant characteristics define the scope of the population. To be selected in the sample, the elements must meet a certain criterion. This gives rise to the fact that the type of non-probability sampling used in this study can be classified as quota sampling.

The population in this study can be defined as companies listed on the JSE. The JSE is divided into three industry sectors, namely the financial sector, the industrial sector and the resources sector (Anon, 2011b:1). The sample to be selected from the population is the Top 40 companies as listed on the JSE. These companies are rated as the Top 40 companies based on their market capitalisation. Each of these companies were analysed and only the companies that disclose operating lease agreements in their notes to the financial statements (**see** individual companies as listed in Table 4.1 (p. 63) for reference to the reference list) were included in the final sample.

A capitalisation model based on research performed by Fulbier *et al.* (2008:127) was used to estimate the remaining lease term and the lease payments remaining by applying this model to the disclosed operating lease information of the companies. The practical working of this model is explained later in the study (par 5.2.2 p. 70). The second criterion to be met is that the model used in the study to determine the lease term can be applied to the specific company. If indeed this is not possible due to the reasons elaborated on in Chapter 5 (par 5.2.2 p. 70), the company will be excluded from the sample even though it does disclose operating lease information. The reason for this is to ensure consistency in performing a comparison between the effect of the current – and proposed – accounting treatment for operating leases on financial ratios.

The initial sample size included 42 companies as indicated by the JSE to form part of the Top 40. The reason why the initial sample includes 42 companies and not the 40 as indicated earlier (par 4.4 p. 61), is that some of the companies may have an equal market capitalisation and therefore are ranked evenly. Of these 42 companies, six companies (14%) did not disclose any information in the notes to their financial statements regarding operating leases. The absence of the disclosure does not necessarily indicate that there are no operating lease agreements that the companies are engaged in; it can also be that the operating lease payments are immaterial. Of the companies that did disclose operating lease agreements in their financial statements, it was not possible to apply the above-mentioned capitalisation model to seven (19%) of these companies due to the reasons mentioned in Chapter 5 (par 5.2.2 p. 70). The initial sample of companies and the reasons for their exclusion from the sample are indicated in Table 4.1 (p. 63).

Table 4.1: Initial sample, reasons for exclusion and JSE industry sector

COMPANY	A	B	C
AFRICAN BANK INVESTMENTS	Financial		
ABSA	Financial		
FIRSTRAND	Financial	√	
INVESTEC LTD	Financial	√	
INVESTEC PLC	Financial		
NEDBANK	Financial		√
OLD MUTUAL	Financial		
RMBH	Financial		
SANLAM	Financial		√
STANDARD BANK	Financial		
ARCELORMITTAL	Resources		
ANGLO AMERICAN	Resources		√
ANGLO PLATINUM	Resources		
ANGLO GOLD	Resources		√
ARM - AFRICAN RAINBOW	Resources		
BHP BILLITON	Resources		
EXXARO RESOURCES LTD	Resources		
GOLDFIELDS LTD	Resources		
HARMONY GOLD	Resources		
IMPLATS	Resources	√	
KUMBA IRON ORE LTD	Resources		
LONMIN	Resources		
SASOL	Resources		√
ASPEN PHARMACEUTICALS	Industrial		
BIDVEST	Industrial		
RICHEMONT	Industrial		
CAPITAL SHOPPING CENTRES PLC	Industrial		
GROWTHPOINT	Industrial		
MONDI GROUP LTD	Industrial		
MONDI GROUP PLC	Industrial		√
MASSMART	Industrial	√	
MTN	Industrial		
NASPERS	Industrial		
PICK N PAY	Industrial	√	

Table 4.1: Initial sample and reasons for exclusion (continued)

COMPANY	A	B	C
REINET INVESTMENTS SCA	Industrial	√	
REMGRO	Industrial		
SAB MILLER	Industrial		√
STEINHOFF	Industrial		
SHOPRITE	Industrial		
TIGERBRANDS	Industrial		
TRUWORTHS	Industrial		
VODACOM	Industrial		
TOTAL		6	7

A: Relating JSE industry sector

B: No disclosure of operating lease activities

C: Capitalisation model not able to be applied to disclosed operating lease information

Source: Anon. 2011b:1

The final sample totalled 29 companies, as indicated in Table 4.2 (p. 64) below:

Table 4.2: Final sample

	Number of companies
Initial sample size	42
No operating lease disclosure in the notes to the financial statements	-6
Model not able to be applied to companies	-7
Final sample size	29

Source: Author

4.5 DATA COLLECTION AND ANALYSIS

4.5.1 Data collection method

After the sampling process had been completed, the relevant data to be used in the study had to be obtained (Adams *et al.*, 2009:87). Data can be collected by making use of two methods, namely qualitative and quantitative methods. The published financial statements of these companies represent the required data, thus making use of quantitative methods of collecting data. The financial statements were obtained before the data was analysed. Validity and reliability of data are discussed next.

4.5.2 Validity and reliability

According to Brynard and Hanekom (2008:47 - 48), **validity** refers to the “what” of data collection techniques, measures and procedures. Henning *et al.* (2009:147) define validity as a measure of whether the researcher is investigating what he says he is investigating by making use of certain methods. Validity therefore means that methods are used to measure the extent to which we are investigating what we portray to investigate.

Reliability refers to the uniformity and precision of measures (Bryman & Bell, 2007:162). According to Brynard and Hanekom (2008:48), the same data must be produced at a later stage under similar circumstances by making use of the same instrument of measure. It can therefore be concluded that reliability results in measuring what is intended to be measured relating to the problem statements and qualitative approach to be used when collecting and analysing data.

The data is collected by obtaining the audited financial statements as published by the companies listed on the JSE. The data is then processed in order to achieve the main and secondary objectives as set out in Chapter 1 (par 1.3 p. 6). In this study, we investigate the effect that the proposed change of IAS 17 will have on financial ratios, by applying the capitalisation model (par 5.2.2 p.70) to the published financial statements of each of the companies that disclose operating lease agreements; therefore ensuring the same outcome for each company included in the sample. Due to this fact, the data collection and analysis may be seen to be valid and reliable.

4.6 ETHICS AND VALUES IN CONDUCTING RESEARCH

Ethics can be defined as being responsible, honest and when doing something, doing it in an honest manner with the necessary level of integrity (Adams *et al.*, 2009:35). According to May (1993:41), ethics is a set of standards and rules whereby a community performs its actions in order to control behaviour and what is regarded as right and wrong in pursuing a specific goal. Ethics plays an important role in the research process, as it governs and separates correct and immoral behaviour. When conducting research, the researcher has a responsibility to conduct this research in an ethical fashion. Over the past decades, the methods, processes and latitude of research conducted have increased and this has placed more focus on the issue that researchers and the research that they are conducting must be performed in an ethical manner (Berg, 2007:53). As a result, researchers must always strive to conduct research in a way that is objective and they have to perform this research with a high level of integrity (Mouton, 2009:240).

4.7 SUMMARY

In this chapter, the research methodology applied in this research was discussed. In this study, a quantitative methodology applies. This study is also relevant for applied research as the effect of the findings of the research may be applied by users of financial statements. The population, which included companies listed on the JSE, and sample size of the study, as well as the procedures and models used for analysing the data were given. The validity and reliability of the data used were discussed.

Ethics in general and its importance in the research process were also highlighted together with the relevance to the study. The findings of the data will be provided in the next chapter of this study.

CHAPTER 5

5. EMPIRICAL RESEARCH FINDINGS

5.1 INTRODUCTION

Leasing activities are an important source of off-balance-sheet financing in South Africa and globally. The IASB therefore drafted a new proposed accounting standard to account for operating leases. The aim of the proposed standard is to indicate the effect of leasing on the financial statements and to ensure that no off-balance-sheet financing takes place (par 1.1 p. 1).

The main objective of this study is to determine the effect of capitalising operating leases on the financial statements by determining the effect on certain financial ratios of companies. The main objective would be achieved by the secondary objectives as listed below:

- Investigating the difference, if any, between the current IAS 17 and the proposed new standard by the IASB, from the perspective of the lessee;
- Identifying the key line items on the financial statements that are affected by the proposed change in accounting treatment for long-term operating leases by the lessee;
- Identifying key financial ratios used by the financial statement users to interpret financial statements of companies in the different industry sectors as listed on the JSE;
- Determining the effect of the capitalisation of operating leases on the identified financial ratios; and
- Formulating recommendations as to whether the proposed new accounting treatment of long-term operating lease contracts will lead to a better universal understanding of the financial implications of long-term operating lease contracts.

The difference between the current IAS 17 and the proposed accounting treatment for operating leases as well as the line items in the financial statements that are affected by the proposed change were identified in Chapter 2 (par 2.3.5 p. 26; par 2.4.5 p. 37; par 2.5 p. 38).

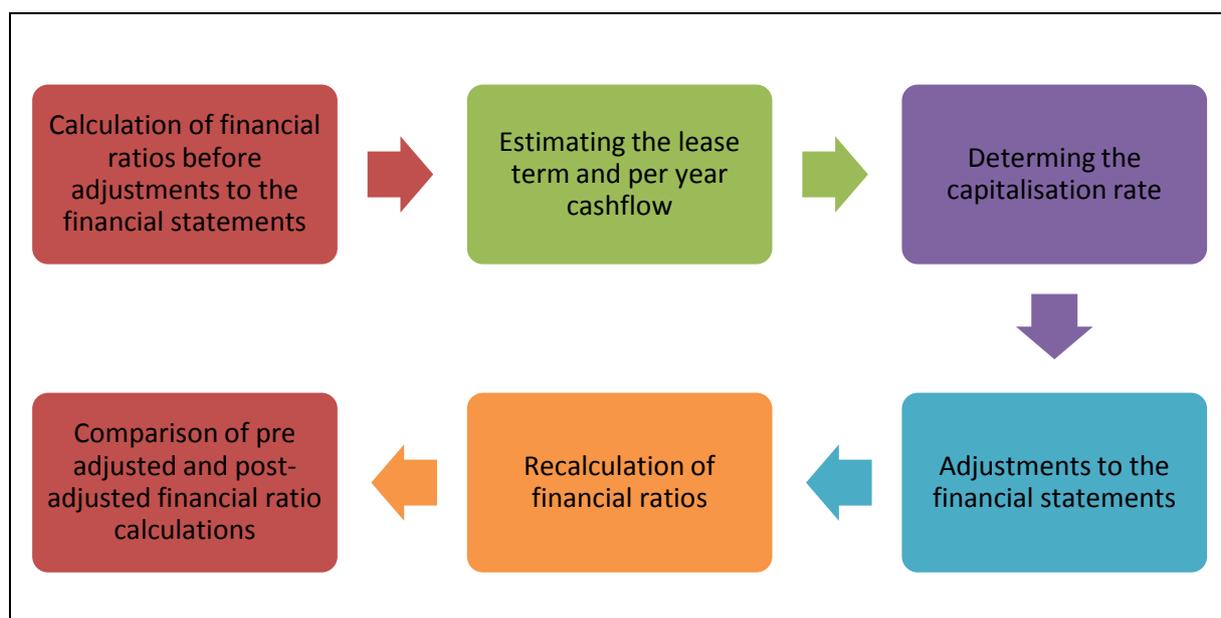
As mentioned in Chapter 3 (par 3.4 p. 48), financial ratios can be divided into three categories, namely i) ratios that indicate the structural change within a company, ii) ratios that indicate the profitability of a company, and iii) ratios that impact the valuation of companies from a market perspective. Financial ratios are used to interpret a company's financial performance and they provide the users of the financial statements with the necessary information they require to make decisions regarding the company (par 3.3 p. 47). Each of these three categories of financial ratios will be discussed separately and any possible change in these ratios due to the new accounting treatment of operating leases will be reported.

A discussion on how the financial statements were analysed and how the data processing took place follows next.

5.2 FINANCIAL STATEMENT ANALYSIS

An in-depth analysis of the disclosed operating lease agreements in the annual financial statements of the sampled companies was performed. The data analysis (without reversing the current operating lease expense as recognised in the financial statements) was performed in six steps in order to compare the effect of the proposed accounting standard on operating leases on financial ratios. These steps are indicated in Figure 5.1 (p. 69).

Figure 5.1: Steps in analysing the effect of the proposed change in IAS 17



Source: Author

The disclosure of the resulting asset or liability that arises from the operating lease payment smoothing is not required by IFRS (par 2.3.3.2 p. 22), and therefore companies do not disclose this information. It was therefore not possible to reverse the operating lease expense recognised in the reported financial statements. One company in the sample did, however, disclose the resulting asset or liability due to payments smoothing voluntarily, and consequently the effect of the reversal on the financial ratios was considered together with the capitalisation effect of future minimum lease payments. It was clear that there is no significant difference whether the current expense is reversed or not as the difference in the financial ratios, as indicated in Chapter 3 (par 3.4 p. 48), was smaller than 1%. Detailed workings of this test of reversal can be seen in Appendix A (p. 112).

Each of the steps, as indicated in Figure 5.1 (p. 69), will now be discussed.

5.2.1 Calculation of financial ratios before adjustments to the financial statements

The relevant financial ratios that will be calculated and the reason for their selection were stated in Chapter 3 (par 3.4 p. 48). These ratios were calculated for each of the sampled companies by using the data obtained from the published financial

statements and the notes to these financial statements. These financial ratios were calculated before any adjustments were made to the financial statements as proposed by the new accounting standard on leases. The next step is to determine the remaining lease term and the per year cashflow.

5.2.2 Estimating the lease term and per year cashflow

According to the current IAS 17 (IASB, 2009b:1213), companies must disclose the future minimum lease payments for each of the following periods:

- For the following year;
- After the following year but not later than five years; and
- After five years.

The proposed accounting treatment for operating lease agreements indicates that all operating lease agreements must be capitalised over the remaining lease term at the present value of the future minimum operating lease payments (**MLP**) (IASB, 2010:10) (par 2.4.3 p. 29). To apply this proposed principle, the remaining lease term and the operating lease payments for each year, need to be calculated. The disclosure requirements of IAS 17, as mentioned above, do not require the disclosure of individual lease agreements. Companies therefore group the operating lease agreements together. It is not possible to isolate the annual payments as needed to determine the per year cashflows and to identify the estimated remaining term of the lease agreements.

Research conducted by Fulbier *et al.* (2008:127) assumed that the lease payments will decline at a constant rate over the remaining lease term of the agreements, because as time passes, contracts come to an end. Therefore, Fulbier *et al.* (2008:127) created a capitalisation model (p. 71) that uses a digression factor (**dg**), in order to segregate the annual payments out of the disclosed information in the notes to the published financial statements. In this study, the same model was applied to determine the operating lease expense or cashflow for the following year and year 2 to 5.

Figure 5.2: Capitalisation model

$$(MLP_{2-5} = \sum_{t=1}^4 MLP_1 \times dg^t)$$

Source: Fulbier *et al.* (2008:127)

The digression factor (**dg**) and annual cashflows were obtained by following steps 1 to 3.

Step 1

Microsoft Excel was used to calculate both the digression factor and the cashflows as disclosed in the notes of the sampled companies. Each disclosure requirement is used as a variable in the capitalisation model in order to calculate the digression factor as seen in Table 5.1 (p. 71).

Table 5.1: Relationship between disclosure requirements and variables used in the capitalisation model

DISCLOSURE REQUIREMENTS	VARIABLE
Minimum rent payment due in the following year	<i>MLP₁</i>
Minimum rent payment due after the following year but not later than five years	<i>MLP₂₋₅</i>
Minimum rent payment due after five years	N/A

Source: Author

Step 2

The model referred to in Step 1 assumes that the minimum operating lease payments decline at a constant rate over time. The model uses a digression factor that is persistent over five periods, with $MLP_{t+1} = MLP_t \times dg$. The known *MLP₁* as disclosed in the notes to the published financial statements determines the unknown *MLP₂*, *MLP₃*, *MLP₄* and *MLP₅* that are grouped together in the disclosure requirements. The data solver function of Microsoft Excel was used to determine the

digression factor by ensuring that, if the digression factor is applied from MLP_1 to MLP_5 , the sum of MLP_2 to MLP_5 equals MLP_{2-5} .

Step 3

In addition to the approach used by Fulbier *et al.* (2008:127), the researcher used the digression factor on the payments due after five years to estimate the cashflows, as well as the remaining lease term after year 5. The current year's payment was determined by taking MLP_1 and appreciating it by the digression factor. The calculated cashflows and lease terms for each company in the sample are presented in Appendix B to this study (p. 113).

This study contributes this enhancement to the study performed by Fulbier *et al.* (2008). This study is also the first study of this nature in South Africa.

5.2.3 Determining the capitalisation rate

The third step in the six-step process, as indicated on Figure 5.1 (p. 69), which analyses the effect of the proposed change of IAS 17, is to determine the capitalisation rate. The proposed IAS 17 prescribes that the future minimum operating lease payments should be capitalised at their present value at the commencement of the lease by using the incremental borrowing rate as discount rate (IASB 2010:20). The incremental borrowing rate is the interest rate that the company would have to pay if indeed they were to borrow the money to buy the asset instead of leasing the asset (IASB, 2010:39-40).

It is not possible to determine this rate for each of the sampled companies, because it will differ from company to company based on factors such as i) the creditworthiness of the company, and ii) the credit risk the company poses to its financiers (Anon, 2009b:1). To ensure consistency and because this rate is the rate that most companies are subjected to, the current South African prime interest rate of 9% was used as the incremental borrowing rate (Anon, 2011a:1). The rate will enable a comparison between the effect of capitalising operating lease agreements on financial ratios and the current accounting treatment. The repo rate was not used because only six companies in the sample will pay interest at the repo rate as only six financial institutions form part of the sample. The repo rate is the interest rate at

which financial institutions borrow from the South African Reserve Bank (Mohr, 2011:177).

5.2.4 Adjustments to the financial statements

One of the secondary objectives of the study is to calculate the financial ratios after the future minimum lease payments have been capitalised. In order to do so, the financial statements of the sampled companies have to be restated with the capitalisation effect. The line items in the annual financial statements previously identified in the study (par 2.3.5 p. 26 & par 2.4.5 p. 37) and their balances needed to compute the identified financial ratios (par 3.4 p. 48) are:

- total assets;
- total liabilities;
- interest expense;
- total equity;
- taxation expense;
- amortisation expense;
- accumulated amortisation;
- net profit;
- earning attributable to shareholders; and
- earnings before interest and taxation (EBIT).

Total assets will be adjusted to include the right-of-use asset to be recognised together with the resulting amortisation and deferred taxation, where applicable. **Total liabilities** will be adjusted by the lease liability that needs to be recognised together with the resulting deferred taxation implications, where applicable, and the capital portion calculated by subtracting the interest component from the operating lease payment. The **interest expense** is calculated by multiplying the current year's operating lease payment with the prime interest rate. The adjustment in **total equity** was obtained by subtracting total adjusted assets from total adjusted liabilities. The **taxation expense** is adjusted by the resulting deferred taxation arising from the interest expense and amortisation that is now recognised. Interest expense is adjusted by the resulting finance charges that arise from the subsequent measurement. **Amortisation expense** and **accumulated amortisation** increase.

The adjustment to **net profit** is a result of the adjustment in interest expense, amortisation and taxation expense. **Earnings attributable to shareholders** are adjusted by the adjustment made to net profit. **Earnings before interest and tax** (EBIT) were adjusted by the resulting change in amortisation expense. Table 5.2 (p. 74) indicates the adjustments to the relevant balances in the reported financial statements:

Table 5.2: Adjustments to the relevant balances in the reported financial statements

	Total assets
	Total assets balance as reported
+	Increase in right-of-use asset
-	Increase in accumulated amortisation
+	Increase in deferred taxation (if applicable)
=	Adjusted total asset balance
	Total liabilities
	Total liabilities balance as reported
+	Increase in operating lease liability
-	Capital portion of payment
+	Increase in deferred taxation (if applicable)
=	Adjusted total liabilities balance
	Total Interest expense
	Total interest expense as reported
+	Increase in interest expense
=	Adjusted increase expense
	Total equity
	Total equity balance as reported
+	Adjusted total assets
-	Adjusted total liabilities
=	Adjusted equity balance
	Total taxation expense
	Total tax expense as reported
+	Increase in deferred taxation
=	Adjusted tax expense

Table 5.2: Adjustments to the relevant balances in the reported financial statements (continued)

	Total amortisation expense
	Total amortisation expense as reported
+	Increase in amortisation expense
=	Adjusted amortisation expense
	Total accumulated (acc) amortisation
	Total acc amortisation balance as reported
+	Increase in amortisation expense
=	Adjusted acc amortisation balance
	Total net profit
	Total net profit as reported
-	Increase in amortisation expense
-	Increase in interest expense
-	Increase in deferred taxation
=	Adjusted net profit
	Total shareholders earnings
	Total earnings as reported
-	Adjustment to net profit
=	Adjusted earnings attributable to shareholders
	Total EBIT
	Total EBIT as calculated
-	Increase in amortisation expense
=	Adjusted EBIT

Source: Author

5.2.5 Recalculation of financial ratios

The fifth step in the six-step process (p. 69) is to recalculate the financial ratios. The financial ratios were recalculated using the adjusted balances of the reported financial statements to include the effect of the capitalisation of future minimum operating lease payments.

5.2.6 Comparison of pre-adjusted and post-adjusted financial ratio calculations

The last step in the six-step process was the comparison of pre- and post-adjusted financial ratios as calculated. The findings of these calculations will now be discussed.

5.3 FINDINGS OF COMPARISON OF FINANCIAL RATIOS

The findings of this research study will be reported for each category of financial ratios as identified by Fulbier *et al.* (2008:128). These are firstly ratios that indicate the structural change within a company, secondly, ratios that indicate the profitability of a company and finally ratios that have an impact on the valuation of companies from a market perspective.

The following will be reported for each category:

- The average change for the entire sample for each type of financial ratio before and after the adjustments for capitalisation of operating leases;
- The percentage change in the financial ratios for the entire sample and for each industry sector individually; and
- A short conclusion about the findings and how the users of the financial statements may interpret the results.

The percentage change is calculated by the following formula:

Figure 5.3: Percentage change (% Δ) formula

$$\% \Delta = \frac{\text{Financial ratio after adjustment} - \text{Financial ratio before adjustment}}{\text{Financial ratio before adjustment}}$$

Source: Author

A comparison between each industry was performed to determine which industry as per JSE category would be affected the most by the proposed change. A more detailed evaluation of each financial ratio can be found in Appendix C (p.114) later in the study.

5.3.1 Financial ratios that indicate structural change within a company

The structural change within a company refers to the change between the financing structures of the company, i.e. whether the company is financed through debt or financed through equity, or a combination of both. The financial ratios that are affected by either equity or debt include the i) debt ratio, ii) debt-to-equity ratio and iii) interest cover. Capitalisation of operating leases will affect both the total assets and liabilities of a company because a right-of-use asset should be recognised together with a corresponding lease liability as per the proposed accounting treatment. Interest charged to the statement of comprehensive income due to the effect of the subsequent measurement required by the proposed accounting standard, will affect the interest cover of the company.

Graph 5.1 (p. 79) indicates the financial ratios before and after adjustment to the financial statements for the capitalisation of operating leases. The results for each of the above-mentioned financial ratios will now be discussed individually.

Debt-to-equity ratio

The debt-to-equity ratio indicates the level of financial risk that the company is exposed to (Correia *et al.*, 2011:5-16; Nadarajah & Kotz, 2007:995). In the total sample the average debt-to-equity ratio of the Top 40 included in the final sample equalled 2.63, before any adjustments were made to the financial statements to account for the proposed accounting treatment change of operating leases. After the adjustments to the financial statements, the debt-to-equity ratio increased to 2.87. This results in a percentage change of 9%, as indicated by Graph 5.2 (p. 80). Therefore, if this proposed change is implemented, the company would seem more risky from a financial perspective and this may cause investors to rethink their investment decision in the company as they would be exposed to higher financial risk than before.

Graph 5.3 (p. 81) indicates the percentage change for the sampled companies as categorised per industry sector as listed on the JSE. The finance- and resource sectors indicated an average change in the sectors' debt-to-equity ratios of 2% and 4%, respectively. The resources will be affected the most if indeed the proposed

change takes effect as it indicates an average change of 41%. This will result in a major increase in the financial risk from an investor perspective.

Debt ratio

Assets are usually funded by debt or equity (Lin, Liang & Chen, 2011:15095; Koen & Oberholzer, 1999:52). The debt ratio indicates the portion or percentage of the total assets that is funded through debt financing. The average debt ratio for the sampled companies before any adjustments accumulated to 48%. After adjusting the financial statements, the average debt ratio increased to 52% for the entire sample, thus resulting in an average increase of 8%. This is a clear indication that operating leases are a form of off-balance-sheet financing, as referred to in Chapter 1 (par 1.1.1 p.1). If we take a closer look at the sampled companies representing the different industry sectors on the JSE, it is apparent that the industrial sector will be affected the most as their average percentage change in the debt ratio because of operating lease capitalisation amounted to 15%; this figure is much higher than the financial- and resources sectors that had an average change of 1% and 3%, respectively. These results are illustrated on Graphs 5.2 and 5.3 (p. 80-81).

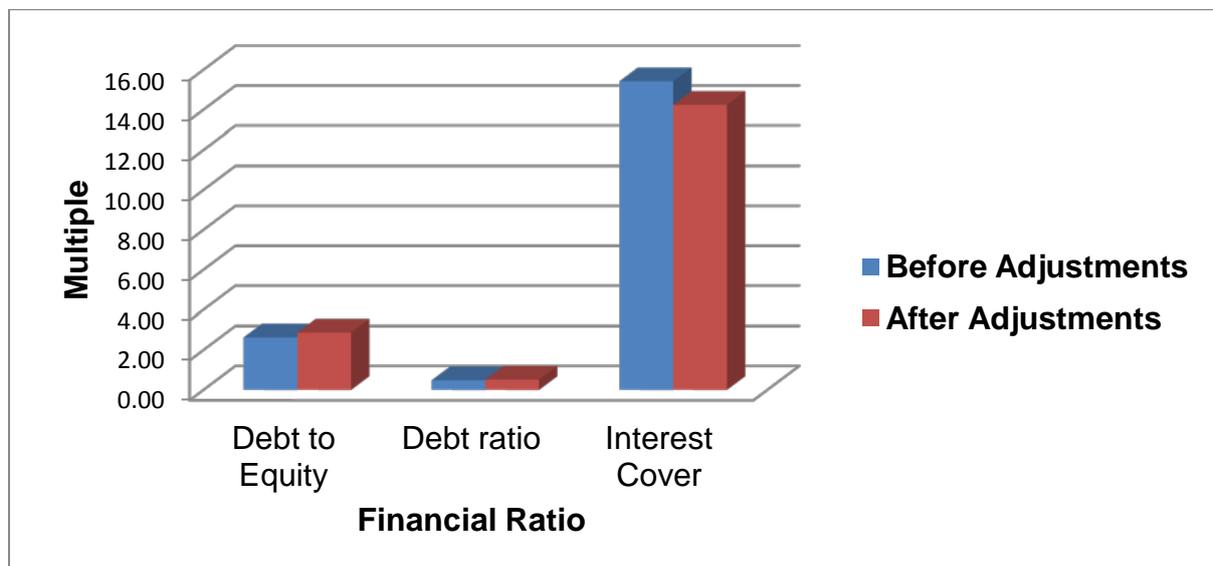
Interest cover

The last selected ratio that indicates structural change within a company is the interest cover ratio. This ratio indicates a company's ability to pay its interest instalments on the date that it is due and the multiple by which a company's earnings may decrease before they would not be able to meet their interest obligation (Vigario, 2008:238; Nadarajah & Kotz, 2007:995). The average interest cover for the entire sample equalled 15.42. This indicates that total earnings are 15.42 times higher than the current interest payments.

After adjusting the financial statements with the proposed changes, the interest cover decreased to an average of 14.24. This is due to the interest that is recognised in the statement of comprehensive income as suggested by the proposed new accounting standard on operating leases. The average change in the interest cover represents a decrease of 8%. This supports the statement that the interest expense that is recognised will decrease the earnings of a company.

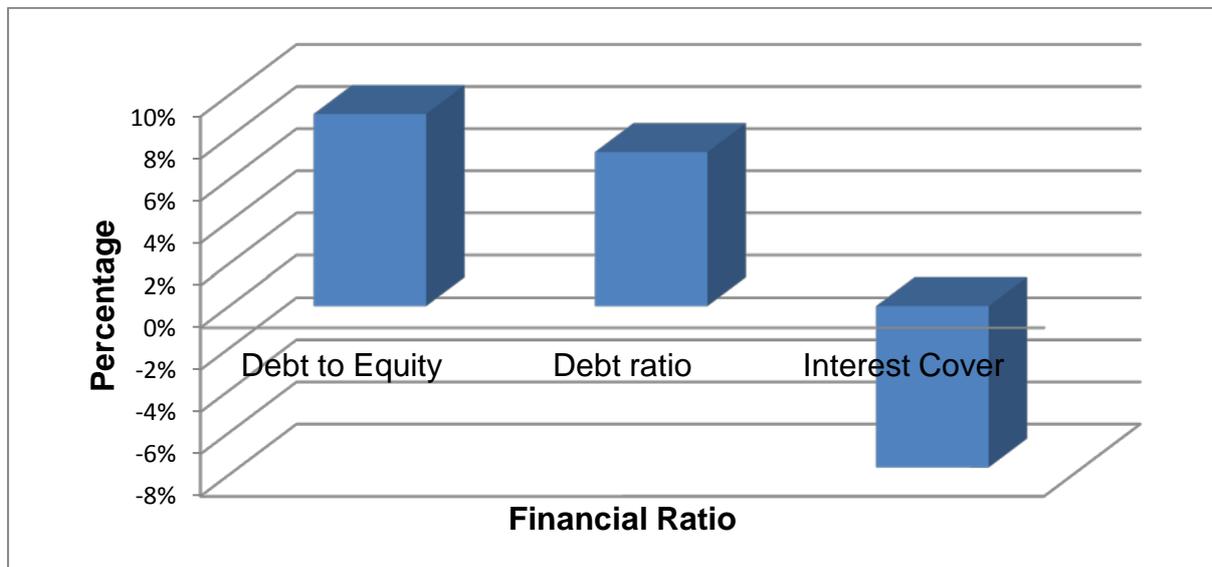
The JSE industry sector breakdown indicated that interest cover for the financial industry increased by 2%. However, the resources and industrial sectors showed a decrease in interest cover of 5% and 14% on average, respectively. The increase in the financial sector in comparison with the decrease in the other sectors is because the financial sector's interest expense on average increased by only 1%, while its EBIT decreased on average by 6%.

Graph 5.1: Financial ratios indicating structural change before and after the adjustments for capitalisation of operating leases



Source: Author

Graph 5.2: The average percentage change for financial ratios that indicate structural change

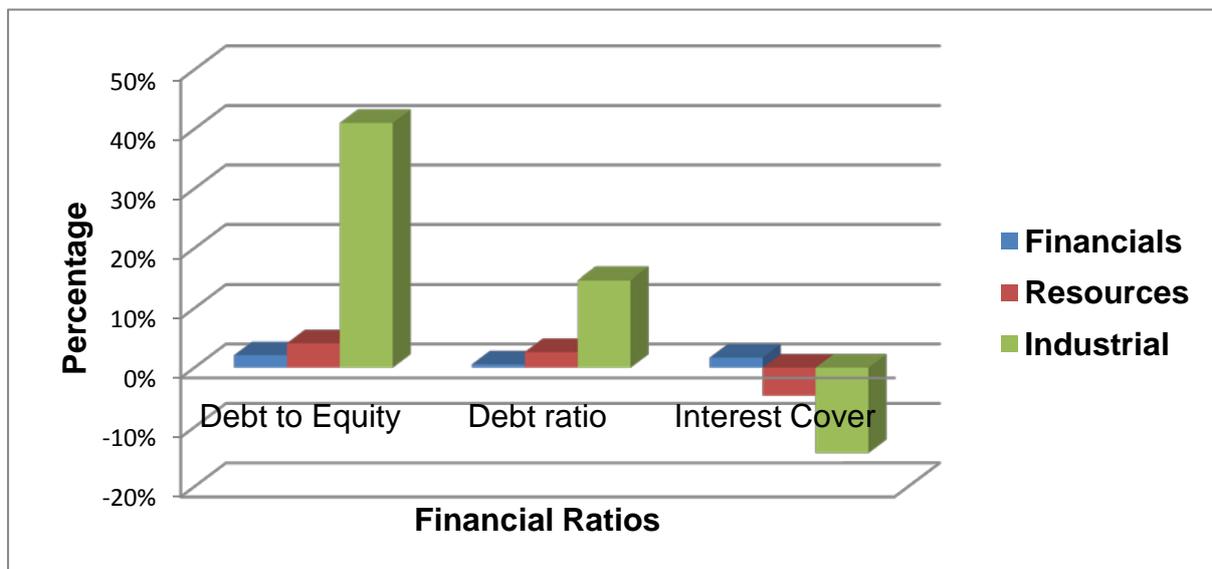


Source: Author

According to Fulbier *et al.* (2008:128), financial ratios that indicate structural change are a measure of financial- and operating risk that investors and companies are exposed to. The structural change ratios that were calculated with the pre- and post-adjusted financial statements results, indicate that the level of risk that the investors are exposed to will increase, thus leading investors to seek a higher return on their investment because of their higher exposure to risk.

When considering the JSE-categorised sectors, the resource sector will be mostly affected by the proposed change as it differs significantly from the other two sectors due to the extensive number of operating lease agreements these companies are engaged in. It can therefore be concluded that the capitalisation of the operating lease obligations of the company therefore gives rise to a more clear position of the entity's current solvency position.

Graph 5.3: Average percentage change for each industry sector as categorised on the JSE



Source: Author

5.3.2 Financial ratios measuring the profitability of a company

As mentioned in Chapter 3 (par 3.4.2 p. 51), the proposed accounting standard on accounting for leases will have an effect on the profitability of a company due to the recognition of the right-of-use asset. This will have a great impact on the reported profit of a company when any impairment losses are recognised according to IAS 36: Impairment of Assets, and any amortisation is recognised according to IAS 38: Intangible Assets (IASB, 2010:20-22). The recognition of a liability to make lease payments will result in the recognition of an interest expense.

The profitability ratios that will be examined to indicate the effect the proposed change in accounting for leases will have on the profitability of a company include the i) net profit percentage, ii) return on equity and iii) return on assets. Graph 5.4 (p. 83) illustrates the average financial ratios before and after making adjustments to a sampled company’s financial statements for the capitalisation of operating leases. The findings for each of the financial ratios will now be discussed individually.

Net profit percentage

The net profit percentage measures the net profit of the company as a percentage of revenue (Etter, Lippincott & Reck, 2006:172). The interest expense recognised together with the amortisation expense will decrease the net profit together with the resulting deferred taxation effect that arises. The results for the sample in respect of the pre-and post-adjusted net profit figures were an average of 19% and 13%, respectively. This led to an average decrease in net profit percentage of 32%, as indicated on Graph 5.5 (p. 84). The sampled companies in the financing sector of the JSE's net profit percentage decreased by 9%, while the resources sector's net profit percentage decreased by 3%. The industrial sector had a significant decrease in net profit of 67%. Graph 5.6 (p.85) illustrates the percentage change between the different JSE sectors individually.

Return on equity

Investors seek returns on their investments made in a company. The return-on-equity ratio indicates the return that investors receive on their investments (Halkos & Salamouris, 2004:208). If the return-on-equity ratio decreases because of the proposed change to accounting for operating leases by the IASB, it may encourage investors to seek other opportunities for investing their funds so as to ensure that they would receive the return that they require.

After investigating the effect the proposed change would have on the return-on-equity ratio, it was found that the average return-on-equity ratio for the entire sample before any adjustments to the financial statements was 19%, as indicated on Graph 5.4 (p. 83). The post-adjusted financial ratio analysis indicated that the average return-on-equity ratio decreased by 21% to yield a return on equity of 15% for the sample. The difference in return can be ascribed to a decrease in earnings because of interest as well as amortisation and deferred taxation implications arising from the proposed change in accounting for operating leases.

A more in-depth JSE sector analysis indicates that the sampled companies from the financial sector will on average have a decrease of 13% for the return-on-equity ratio. Resources and Industrials each showed a decrease in return on equity of 3% and 29% respectively, as indicated on Graph 5.6 (p. 85). The industrial sector's

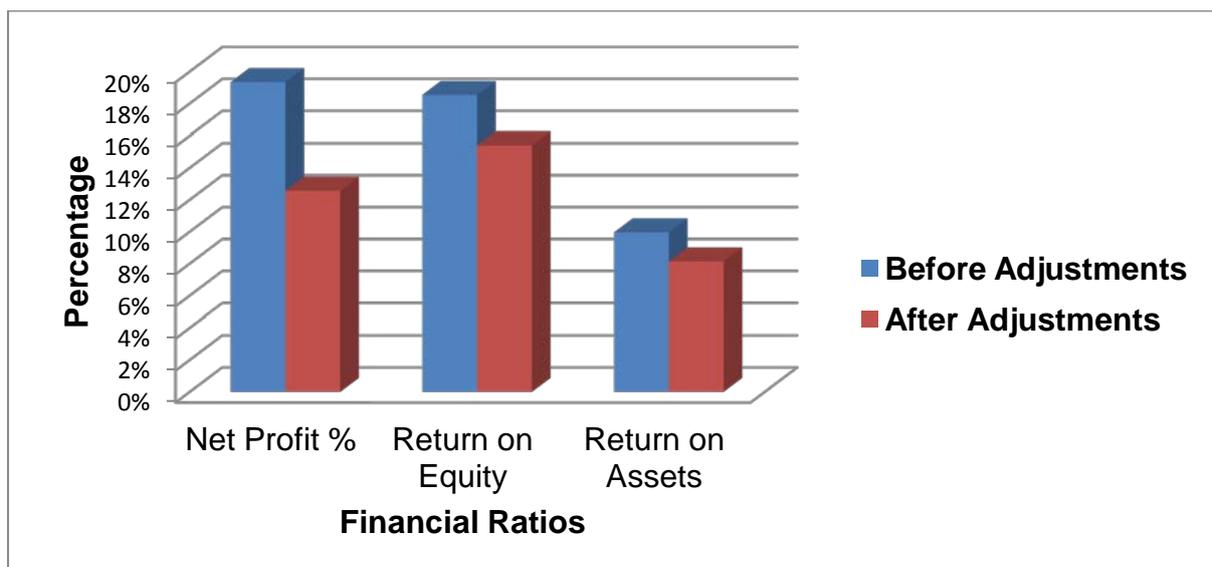
profitability will therefore be affected most by the proposed change in accounting for operating leases.

Return on total assets

The return-on-assets financial ratio measures the return a company yields by employing its assets (Correia *et al.*, 2011:5-16; Halkos & Salamouris, 2004:208). The proposed change will not only affect the earnings of the company, but also the total assets because a right-of-use asset will be recognised in the financial statements of the lessee.

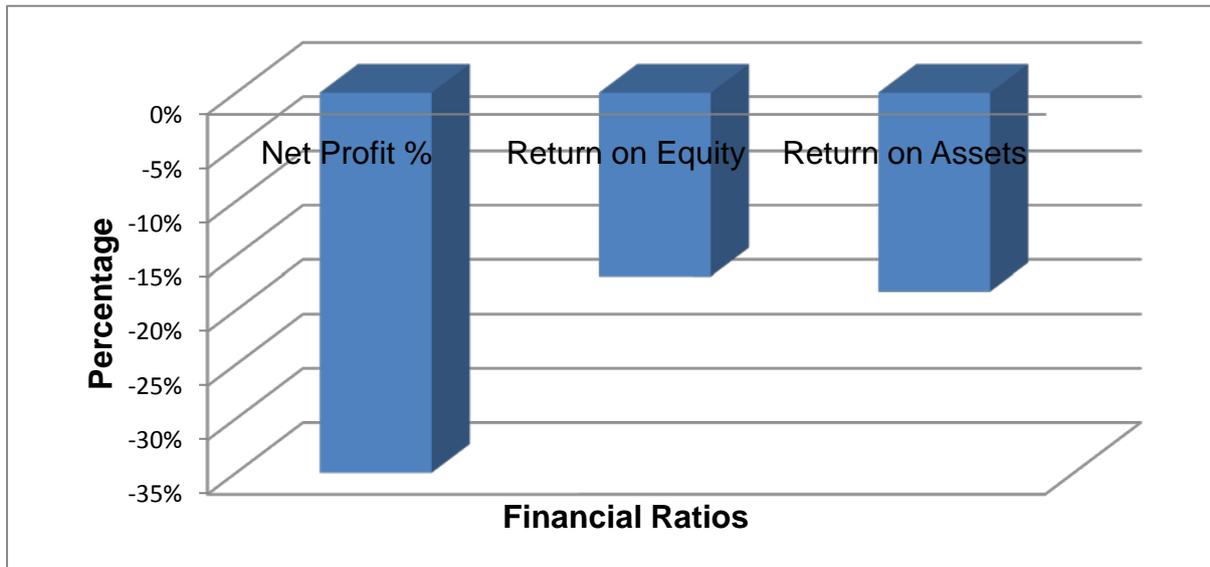
The sample has an average pre-adjusted return on assets of 10%. Using the post-adjusted financial statements, a return-on-assets ratio of 8% was calculated resulting in a decrease of 20%, as illustrated on Graphs 5.4 and 5.5 (p. 83-84), respectively. The JSE sector analysis highlighted that the financial sector achieves a decrease in return on assets of 10%, which is much higher than the 3% decrease of the resource sector. The industrial sector will calculate a decrease of 34%, on average.

Graph 5.4: Average for each type of financial ratio measuring profitability before and after the adjustments for capitalisation of operating leases



Source: Author

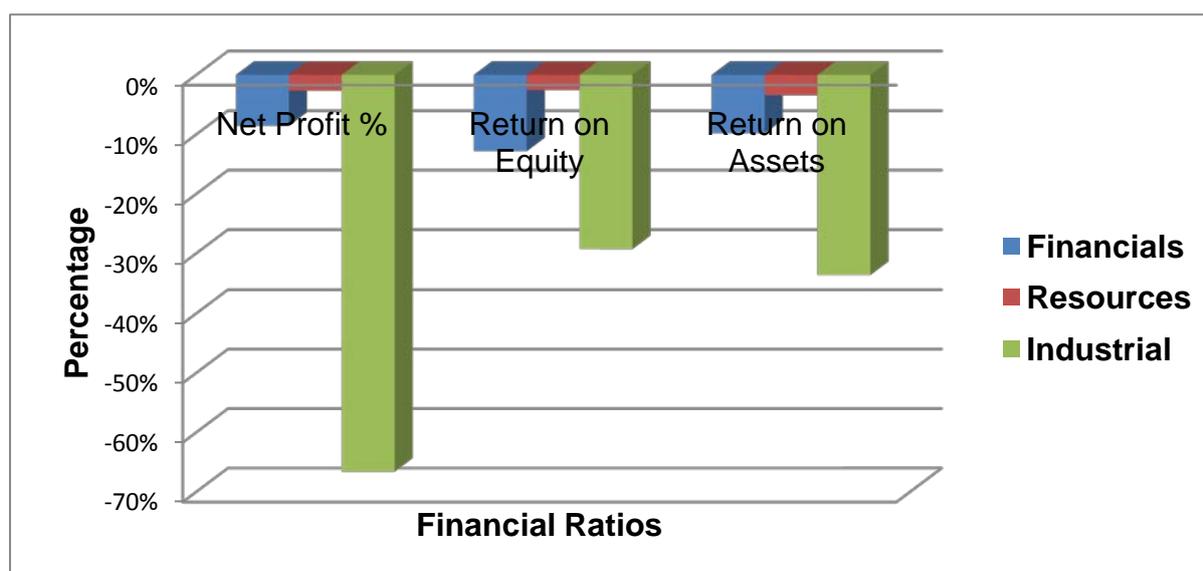
Graph 5.5: Average percentage change for each type of financial ratio measuring profitability



Source: Author

Profitability ratios indicate the company's ability to generate profit. The proposed change in accounting for operating leases does not only affect the earnings of a company, but also the assets used to generate these earnings. When all the ratios measuring profitability are considered, it is clear that a company's profitability may decrease due to the proposed change in accounting for operating leases.

Graph 5.6: Average percentage change for each JSE industry sector



Source: Author

The financial and resources sectors' profitability ratios are not significantly affected by the proposed change, while the industrial sector's profitability will be affected most. Companies may need to re-evaluate their strategies in connection with asset management and the financing of these assets in order to generate increased revenue.

5.3.3 Financial ratios impacting valuation of companies from a market perspective

The valuation of companies from a market perspective includes the use of certain models such as the price-earnings model. The proposed change in accounting for operating leases affects the earnings as indicated earlier in this chapter (par 5.3.2 p. 81). In effect, this will influence the earnings per share of a company. The price earnings model uses an industry average price-earnings ratio and the market price of the company's shares to value a company. The price-earnings ratio is calculated by dividing the market price of an individual share by the earnings per share. The price-earnings ratio of companies will therefore be affected by the proposed change in accounting for operating leases.

The ratios to be considered, that impact the valuation of companies from a market perspective, therefore include the i) earnings per share and ii) price-earnings ratio.

The effect of the proposed change of accounting for operating leases on these valuation ratios will now be discussed.

Earnings per share

Earnings per share (EPS) is a ratio that measures the performance of a company and indicates the return that investors yield on their investments (Correia *et al.*, 2011:5-20; Lin, Liang & Chen, 2011:15095). This ratio is of such importance that disclosure with regard to the EPS ratio in the financial statements is mandatory as stipulated in IAS 33 (IASB, 2009b:1715).

The average EPS for the sampled companies amounted to R16.02 per share as indicated in Graph 5.7 (p. 87). After adjusting the financial statements to account for the proposed change in IAS 17, the average EPS for the sample decreased to R14.05. This results in a decrease of 12%, as reflected in Graph 5.8 (p. 88). When considering the JSE sectors individually, it was found that the financing sector had a decrease of 9% in its average earnings per share. The resource and industrial sectors' EPS also declined by 2% and 25%, respectively. Graph 5.9 (p. 88) illustrates the per sector change in the financial ratios used to value companies from a market perspective.

Price-earnings ratio

The price-earnings (PE) ratio is used in the price-earnings valuation model to value companies. This ratio indicates the amount that investors are willing to pay per rand of the profits that are disclosed. The PE ratio will be influenced by a movement in earnings and the resulting EPS, as disclosed in the financial statements of a company (Al-Ajmi, 2008:109). In this study, the EPS on average decreased because of the proposed change of IAS 17 in connection with operating leases.

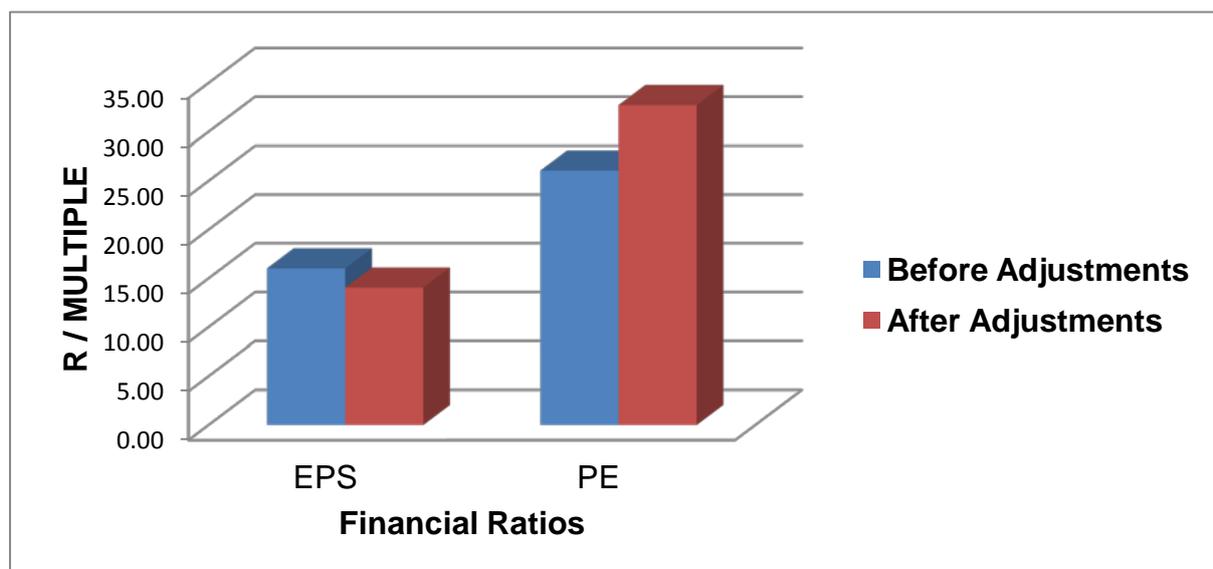
The result that is expected from the declining EPS is that the PE ratio on average should increase if market prices stay constant. This would seem to add value to the company if indeed the price earnings model is used to value the company. It is important to consider the working of the price earnings valuation model. The PE valuation model uses the sustainable earnings multiplied by an average industry PE

ratio to estimate a value for the company (Correia *et al.*, 2011:6-18), not the PE ratio of the company that is valued.

In this study, the average pre- and post-adjusted PE ratio for the sample was calculated as 26 and 33 respectively, resulting in an increase of 26%. The JSE sector breakdown indicated that the average PE ratio of the financial sector increased by 58%, while the average PE ratio of the industrial sector increased by 38%. The resource sector's PE ratio increased by 7%.

All the above-mentioned findings in connection with the EPS ratio and the PE ratio are illustrated in Graphs 5.7 to 5.9 (p. 87-88).

Graph 5.7: Average for each type of financial ratios used to value companies from a market perspective

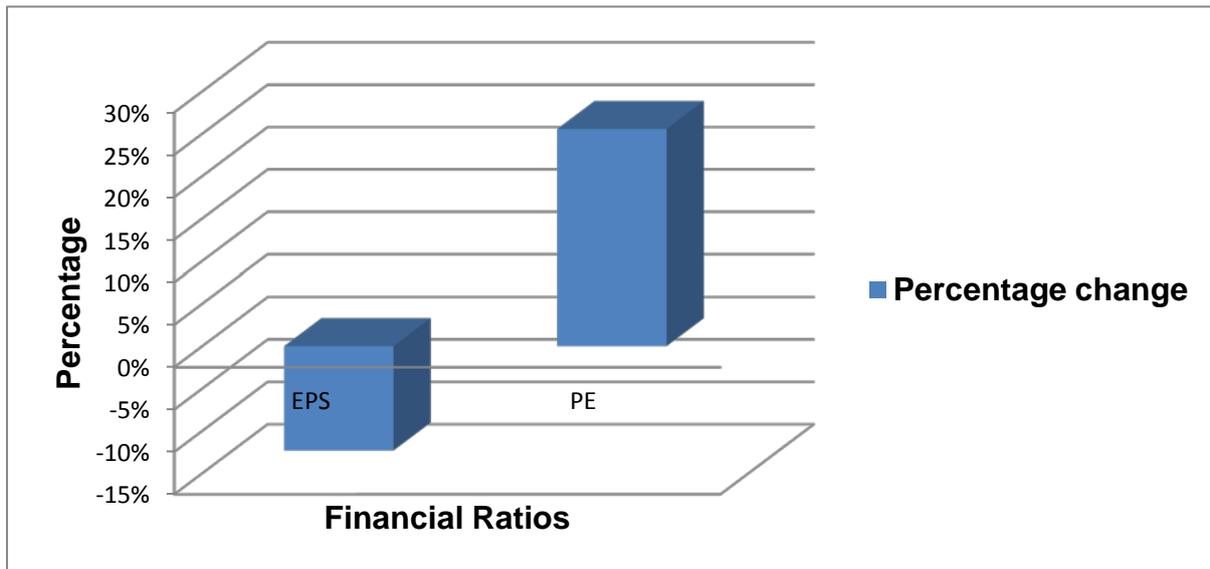


EPS – Earnings per share

PE – Price-earnings ratio

Source: Author

Graph 5.8: Average percentage change for each type of financial ratio used to value companies from a market perspective

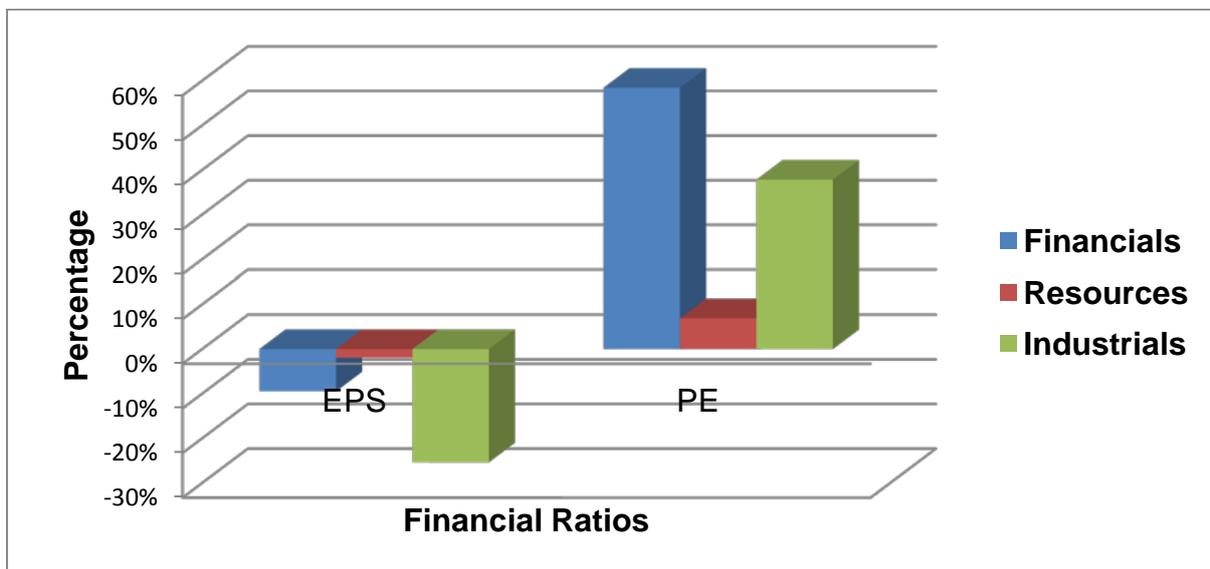


EPS – Earnings per share

PE – Price-earnings ratio

Source: Author

Graph 5.9: Average percentage change for each JSE industry sector



EPS – Earnings per share

PE – Price earnings ratio

Source: Author

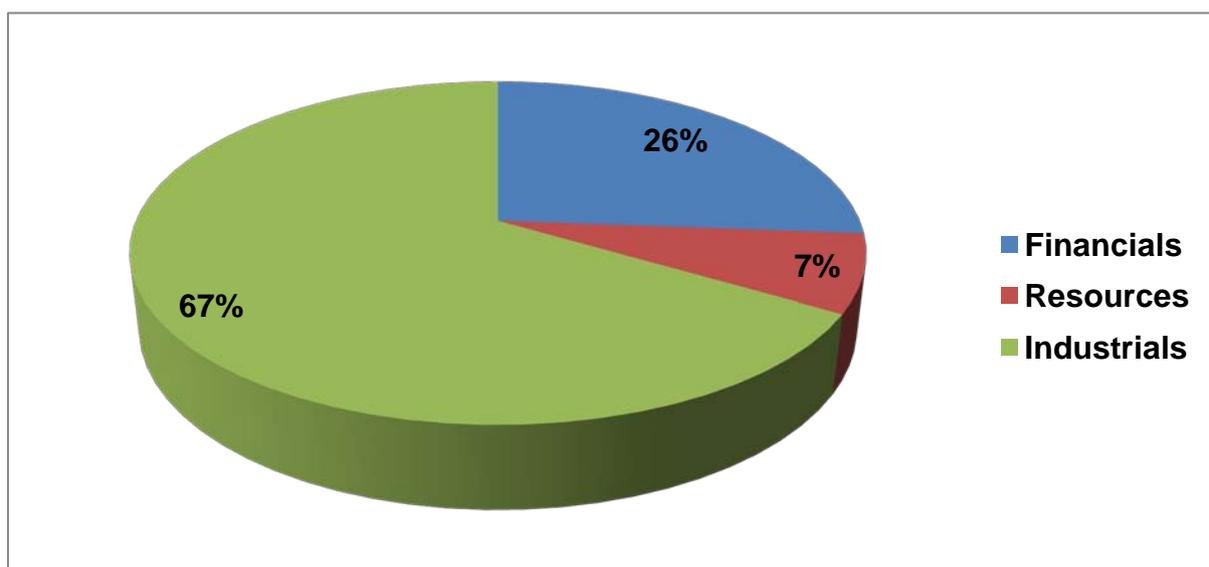
The proposed change by the IASB will have a negative impact on the disclosed EPS of companies that take part in operating lease activities. The negative effect is shown in the falling EPS of the companies. The decrease in EPS may encourage investors to seek other companies to invest in either to generate a higher return or companies that seem less risky.

5.4 COMPARISON OF THE EFFECT ON EACH INDUSTRY INDIVIDUALLY

The effect of the proposed change by the IASB had different outcomes on each of the JSE sectors discussed in Chapter 4 (par 4.4 p. 61), depending mostly on the volumes of operating lease activities that the companies in the different sectors are engaged in.

The sector that is affected the most by the proposed change was the industrial sector. The main reason for this is because the companies that are categorised as industrial sector companies are currently engaged in the most operating lease activities as was evident in the notes to their annual financial statements. Graph 5.10 (p. 89) indicates the total average percentage change in the financial ratios per JSE sector.

Graph 5.10: Average percentage change in total for each JSE industry sector



Source: Author

5.5 SUMMARY

The aim of this chapter was to consider the effect, if any, that the proposed change of IAS 17 in connection with operating lease accounting will have on certain financial ratios. In this chapter, the financial ratios were discussed firstly by category, followed by an in-depth discussion of the effect the proposed change of IAS 17 by the IASB would have on each individual financial ratio. A JSE sector categorisation was also performed to indicate the effect of the change on each of the JSE sectors individually.

It was found that the structural change ratios that were calculated with the pre- and post-adjusted financial statements results indicated that the levels of risk investors are exposed to will increase. Because of the increase in risk, investors may seek a higher return on their investment.

When the profitability of companies was considered, the proposed change in accounting for operating leases does not only affect the earnings of a company, but also the assets used to generate these earnings. The proposed change in accounting for operating leases may result in a decrease in earnings that will affect the ratios that are used in the valuation of companies from a market perspective. The negative effect is shown in the falling EPS of the companies. The negative or decreasing profitability ratios may have a signalling effect to low-risk investors causing them to divest their current investments and invest in other companies that are less risky and thereby suiting their risk appetite.

When a per-sector breakdown was investigated, it was found that the industrial sector will be mostly affected by this proposed change. Sectors like the financial and resources sectors do not indicate a significant change. This serves as an indication that companies may need to reconsider their approach to asset management and the source of finance for these assets.

CHAPTER 6

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter will revisit the research objectives as set out in Chapter 1 (par 1.3 p. 6). The main objective of this study was to determine whether the capitalising of long-term operating leases as proposed in the exposure draft (ED/2010/9) by the IASB will have an effect on the financial ratios of the Top 40 JSE listed companies in South Africa.

The secondary objectives as provided in Chapter 1 (par 1.3 p. 6) were:

- Investigating the difference, if any, between the current accounting standard on accounting for leases, IAS 17, and the proposed new standard by the IASB, from the perspective of the lessee;
- Identifying the key line items on the financial statements that are affected by the proposed change in accounting treatment for long-term operating leases by the lessee;
- Identifying key financial ratios used by the financial statement users to interpret financial statements of companies in the different industry sectors listed on the JSE;
- Determining the effect of the capitalisation of operating leases on the identified financial ratios; and
- Formulating recommendations on whether the proposed new accounting treatment of long-term operating lease contracts will lead to a better universal understanding of the financial implications of long-term operating lease contracts.

The findings of the study are based on the data analysis performed that was presented in Chapter 5 of this study. Furthermore, this chapter's aim is to make conclusions based on the research findings as presented in Chapter 5 (par 5.3 p. 76) in order to meet the objectives as set out in Chapter 1 (par 1.3 p. 6). Recommendations will be made on the proposed change of IAS 17 as to explain whether this change by the IASB would ensure a more fair presentation of the

operating lease activities that companies engage in. Areas for further research as well as the limitations to the study will be discussed. The conclusion of this chapter will include the main contribution the study has made and a summary presentation of the research performed. The conclusions will be discussed next together with the objectives that led to the research being performed.

6.2 CONCLUSIONS ON SECONDARY RESEARCH OBJECTIVES

The main objective of the study is supported by its secondary objectives. Each secondary objective and the resulting conclusions in connection with each objective will be discussed separately.

6.2.1 Difference between the current IAS 17 and the proposed new standard

In Chapter 2, consideration was given to the history of the development of the current IAS 17 (par 2.2 p. 11). The differences between i) the current IAS 17 and ii) the proposed new accounting standard developed by the IASB to account for operating leases in the financial records of the lessee, were investigated. The main reason for the proposed change is to avoid any off-balance-sheet financing by financing assets through operating lease agreements. After comparing these two approaches it was found that there are significant differences in the treatment of operating leases from an accounting perspective.

Financial statement line items affected by this proposed change were identified (par 2.3.5 p. 26 & par 2.4.5 p. 37). This was achieved by comparing the current and proposed accounting treatment in respect of i) recognition, ii) initial measurement, and iii) subsequent measurement in the financial records of the lessee (Table 2.6 p.39). Table 6.1 (p. 93) indicates the main differences between the current IAS 17 and the proposed accounting standard on leases.

Table 6.1: Main differences between the current IAS 17 and the proposed accounting standard on accounting for leases from the perspective of the lessee

CURRENT IAS 17	PROPOSED IAS 17
Initial recognition	
At commencement of the lease term, lessees distinguish between operating leases and finance leases .	No distinction is made between operating and finance leases. All lease contracts are recognised as finance leases .
Initially, a finance lease asset is recognised with a corresponding finance lease liability .	Initially, a right-of-use asset is recognised with a corresponding liability to make lease payments .
Initial measurement	
Finance leases are initially recognised at the lower of the fair value of the asset and the present value of the minimum lease payments .	Leases are recognised at the present value of the lease payments .
The rate implicit to the lease is used to determine present value of the minimum lease payments.	The lessee's incremental borrowing rate is used to determine the present value of the lease payments.
The lease term is the non-cancellable term as specified in the lease contract.	The lease term is the longest term, more likely than not , that the lessee is going to lease the asset.
Subsequent measurement	
Finance lease liability	Liability to make lease payments
Apportioning of lease payments into capital and interest expenses.	Apportioning of lease payments into capital and interest expenses.
Finance lease asset	Right-of-use asset
Subsequently measured in accordance with IAS 16 : Property, plant and equipment.	Subsequently measured in accordance with IAS 38 : Intangible assets.
No revaluation of the asset.	Revaluation may take place according to IAS 16: Property, plant and equipment.
No impairment according to IAS 36: Impairment.	Testing for impairment according to IAS 36: Impairment.

Source: Author

It can therefore be concluded that the differences between the current IAS 17 and the proposed accounting treatment by the IASB have been identified. The effect of these differences on the key line items in the financial statements is discussed next.

6.2.2 Identification of key line items affected by the proposed change

The key line items affected by the proposed change of IAS 17 were identified and presented in Chapter 2 (par 2.3.5 p. 26 & par 2.4.5 p. 37). These line items were used to identify the key financial ratios indicated in Chapter 3 (par 3.4 p. 48) affected as a result of the proposed change in accounting treatment of operating leases.

6.2.3 Key financial ratios used by financial statement users

Financial statement users make use of certain financial ratios to evaluate a company's performance. The financial ratios affected by the capitalisation of operating lease contracts were identified (par 3.4 p. 48). The categories together with the identified financial ratios are indicated in Table 6.2 (p. 95).

Table 6.2: Financial ratio categories together with the identified financial ratios

<p>Category 1: Financial ratios that indicate structural change within a company:</p> <ul style="list-style-type: none">• Debt-to-equity ratio• Debt ratio• Interest cover
<p>Category 2: Financial ratios that indicate profitability of a company:</p> <ul style="list-style-type: none">• Net profit percentage• Return on equity• Return on assets
<p>Category 3: Financial ratios that are used for valuation purposes from a market perspective:</p> <ul style="list-style-type: none">• Earnings-per-share ratio• Price-earnings ratio

Source: Author

The identified financial ratios were tested for any changes due to the capitalisation effect of operating leases. These findings were reported in Chapter 5 (par 5.3 p. 76). The next paragraph will elaborate on the findings.

6.2.4 Effect of the capitalisation of operating leases on the identified financial ratios

The aim of Chapter 5 was to reflect the effect, if any, that the proposed change of IAS 17 in connection with operating lease accounting will have on certain financial ratios.

It was found that the structural change ratios, such as the debt-to-equity ratio and the debt ratio indicated a percentage change of, on average, 9% and 8% respectively. Interest cover indicated on average a decrease of 8% for all the companies included in the sample. This is a direct result of the lease liability and interest expense that is recognised, as discussed in Chapter 2 (par 2.4.3 p. 29). The increase in risk that **investors** are exposed to may cause investors to seek a higher return on their

investments; this causes the company's access-to-equity financing to reduce. This may limit a company's ability to pursue long-term investment projects and the resultant creation of shareholder wealth.

Profitability of companies was considered and the effect determined on the ratios that indicate the profitability of companies. It was found that the proposed change in accounting for operating leases does not only affect the earnings of a company, but also the assets used to generate these earnings. The proposed change in accounting for operating leases resulted in a decrease in the overall profitability of the companies evaluated. The financial ratios such as net profit percentage, return on equity and return on assets on average indicated a decrease of 32%, 21% and 20%, respectively. This resulting decrease in profitability will affect the ratios that are used in valuation of companies from a market perspective.

The financial ratios used to value companies included the earnings-per-share ratio and the price-earnings ratio (par 3.4.3 p. 54). Earnings per share on average indicated a decrease of 12% with a resulting increase of 27% in the price-earnings ratio. It is important to understand the working of the price-earnings valuation model (par 5.3.3 p.85), as an increase of 27% does not necessarily indicate a higher value for the companies.

The JSE sector analysis for the sampled companies indicated that the industrial sector will be affected the most by this proposed change, as an average percentage change of 67% was calculated. The financial ratios of the financial sector on average changed by 19% less than that of the industrial sector. The resources sector will be affected the least with an average percentage change of 7%.

All of the above findings and the calculations with regard to the pre- and post-adjusted financial ratios are presented in Appendix C (p. 114). Conclusions with regard to the main objective will now be discussed.

6.3 CONCLUSION ON MAIN RESEARCH OBJECTIVE

The main objective of this study was to determine the effect of capitalising long-term operating leases on the financial ratios of the Top 40 JSE-listed companies in South Africa. The aim was to meet the main objective by firstly drawing conclusions on the secondary objectives as set out in par 6.2.1 to 6.2.4 (p. 92). After considering the conclusions made on the grounds of literature reviews performed on accounting for operating leases and the data analysis performed presented in Chapter 5 (par 5.2 p. 68), it can be concluded that the proposed change by the IASB would affect the financial ratios of the Top 40 JSE-listed companies to a significant degree. Recommendations on whether the proposed new accounting treatment of long-term operating leases will lead to a better universal understanding of the financial implications of long-term operating lease contracts will now be discussed.

6.4 RECOMMENDATIONS

As mentioned in Chapter 1 (par 1.1 p. 1), individuals in the accounting world are of the opinion that the current accounting standard on leases, with regard to the assets and liabilities arising from leasing contracts, are not disclosed appropriately. They are of the opinion that it currently does not contain adequate information that the users of the financial statements may use to fully understand the scope of the leasing activities that companies are engaged in (Grossman & Grossman, 2010:6).

The main reason for the lack of providing a sufficient reflection of the leasing activities that companies engage in is the fact that leases can be classified into operating leases rather than finance leases. This choice in lease type holds a great advantage as it creates an opportunity for companies to have off-balance-sheet financing and thus ensuring that no on-balance-sheet debt appears in the financial statements (Fulbier *et al.*, 2008:123).

The IASB and the FASB are currently in the process of redeveloping a new IAS 17 to ensure that sufficient information on the liabilities and assets that arise from lease contracts are disclosed. The IASB is of the opinion that the new accounting standard will give rise to more reliable information regarding companies' financing structures and that it will minimise the effect of off-balance-sheet financing (IASB, 2010).

In order for the IASB to meet their set objectives, they released an exposure draft on leases (ED/2010/9) in August 2010. This exposure draft contains the suggested changes to the current IAS 17 that will ensure that all operating lease agreements are reflected as on-balance-sheet debt in the financial statements, thereby overcoming the shortcomings of the current IAS 17.

The effect of the proposed change on the financial statements was discussed in Chapter 2 (par 2.3.5 p. 26 & par 2.4.5 p. 37). The suggested change of IAS 17 will result in a number of line items and financial ratios to increase or decrease as it reflects the right-of-use asset and the liability to make lease payments that is necessary to ensure that users of financial statements understand the full scope of the leasing activities that companies are engaged in.

The effect of this change will have to be communicated to the company's investors, as this change will have an effect on their investment in the company. The estimated implications on the share price as well as the possible effect on the company's Top 40 rating on the JSE together with other stakeholder-related information should be communicated to the investors. Not only the negative effect, if any, must be communicated, but also what the company's strategy is to ensure that the proposed change of IAS 17 does not significantly affect their share price and Top 40 rating. Some of the strategies may include the following:

- How will the company restructure its financing policy and structures to ensure very little or no effect;
- If indeed there is a negative effect, what the company's proposal is to ensure that this will be restricted;
- What the positive effect of the proposed change to IAS 17 is and how it will enhance the company's ability to generate shareholder wealth.

It can therefore be concluded that the suggested accounting standard by the IASB does have an effect on the financial ratios and that the capitalisation of operating lease contracts will lead to a better universal understanding of the financial implications of long-term operating lease contracts. The limitations in performing this research are presented in the paragraphs that follow.

6.5 LIMITATIONS AND SHORTCOMINGS

In relation to the proposed change as suggested by the IASB, a number of items should be included in the right-of-use asset and liability to make lease payments by discounting them with the incremental borrowing rate of the lessee. These items include i) the minimum lease payments, ii) contingent rentals, iii) guaranteed residual values at fair value and iv) amounts payable on any renewal options. The disclosure of these items is not mandatory and therefore only the minimum lease payments were considered in estimating the resulting change in the financial ratios. As the incremental borrowing rate of the lessee will differ from lessee to lessee because of a number of reasons, it was not feasible to obtain the incremental borrowing rate for each company individually. The current prime interest rate in South Africa was used to discount the above-mentioned items.

In considering the minimum lease payments, it was found, due to the grouping effect, that it was necessary to estimate the remaining lease terms and the per year cashflows by making use of the capitalisation model used in the study by Fulbier *et al.* (2008:127) on listed German companies. This is due to the disclosure requirements in the current IAS 17.

Another limitation is the availability of data relating to the operating lease activities and the applications of the model developed by Fulbier *et al.* (2008:127). Among the 42 sampled companies, six did not disclose any information about operating lease activities. Of the companies that did disclose information in connection with operating lease contracts, the capitalisation model could not be applied to seven companies as discussed in Chapter 4 (par 4.4 p.61), making it difficult to come to a conclusion on all the companies in the JSE Top 40. Nonetheless, this study's sample size still constitutes 75% of the initial population.

6.6 AREAS FOR FURTHER RESEARCH

Areas for further research include:

- Replicating this study to determine the effect on companies not listed or for privately-owned companies;
- Another research design, such as a case study, could be used to determine the effect of operating lease capitalisation. This could ensure a more accurate estimation of the effect as a small sample will ensure that the lease contracts could be investigated on a lease-by-lease basis in order to determine the exact remaining lease term, remaining minimum lease payments and any other items that should be included in the calculation of the present value of the lease payments, as mentioned in par 6.5 (p. 99);
- Investigating the reason for the differences in the findings between this study and studies performed in other countries; and
- Proposed strategies companies can implement and form part of their financing structure to ensure the effect of the proposed change of IAS 17 does not have such a great effect on their financial statements and the resulting financial ratios.

6.7 SUMMARY

This study examined the potential consequences of treating operating lease contracts as on-balance-sheet debt by determining the effect of operating lease capitalisation on financial ratios of the JSE Top 40 companies. No other studies using a capitalisation model to estimate the remaining lease term and per year cashflows have been performed on listed JSE companies in South Africa.

It was identified in Chapter 5 (par 5.3 p. 76) that the proposed change of IAS 17 will have a significant effect on the financial ratios in general, and for certain JSE sectors (industrials) in particular. It was concluded that the financial ratios affected the most include the ratios that indicate structural change and are used for valuation purposes from a market perspective. The reason being the interlink working of the Statement of Financial Position balances. The results of this study indicated the opposite of the results found by Fulbier *et al.* (2008:141), in their study of the capitalisation effect of operating lease activities on listed German companies, as this study indicated little

effect on the financial ratios used in valuation of companies from a market perspective.

It can therefore be concluded that the proposed change of IAS 17 by the IASB will ensure that accounting reform takes place and thus making the information disclosed in the financial statements more reliable and understandable in order to assist the users of the financial statements in interpreting the financial status of a company.

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APPENDIX A: Test of reversal and non-reversal of operating lease expenses

	FINANCIAL RATIOS - BEFORE ADJUSTMENTS								FINANCIAL RATIOS - AFTER ADJUSTMENTS							
	?:1	?:1	Times	%	%	%	Multiple	Multiple	?:1	?:1	Times	%	%	%	Multiple	Multiple
<u>Test</u>	Debt to Equity	Debt ratio	Interest Cover	Net Profit %	Return on Equity	Return on Assets	EPS R	PE	Debt to Equity	Debt ratio	Interest Cover	Net Profit %	Return on Equity	Return on Assets	EPS R	PE
Test with reversal of operating lease expense	0.52	0.34	39	22%	18%	12%	39.08	17.76133627	0.53	0.35	35.06	22%	18%	12%	R 39.02	R 17.79
Test without reversal of operating lease expense	0.52	0.34	39	22%	18%	12%	39.08	17.76133627	0.53	0.35	34.76	22%	18%	12%	R 38.71	R 17.93
Percentage difference									0.11%	0.07%	-0.86%	-0.77%	-0.73%	-0.77%	-0.78%	0.79%

Source: Author

APPENDIX C: Financial ratios before and after adjustments and relating percentage change

	Year End	FINANCIAL RATIOS - BEFORE ADJUSTMENTS								FINANCIAL RATIOS - AFTER ADJUSTMENTS								FINANCIAL RATIOS - PERCENTAGE CHANGE							
		?:1	?:1	Times	%	%	%	Multiple	Multiple	?:1	?:1	Times	%	%	%	Multiple	Multiple	?:1	?:1	Times	%	%	%	Multiple	Multiple
		Debt to Equity	Debt ratio	Interest Cover	Net Profit %	Return on Equity	Return on Assets	EPS R	PE	Debt to Equity	Debt ratio	Interest Cover	Net Profit %	Return on Equity	Return on Assets	EPS R	PE	Debt to Equity	Debt ratio	Interest Cover	Net Profit %	Return on Equity	Return on Assets	EPS R	PE
AFRICAN BANK INVESTM	30-Sep-10	2.04	0.67	2.05	16%	15%	5%	2.37	15	2.25	0.69	1.83	11%	11%	3%	1.64	22								
ABSA	31-Dec-10	10.53	0.91	0.82	24%	14%	1%	11.33	12	10.75	0.91	0.80	21%	12%	1%	9.97	14								
INVESTTECP	31-Mar-10	13.15	0.93	-0.10	10%	10%	1%	4.27	15	13.48	0.93	-0.11	8%	8%	1%	3.47	18								
OLD MUTUAL	31-Dec-10	15.87	0.94	-12.57	0%	0%	0%	-0.56	-23	16.06	0.94	-11.97	-1%	-1%	0%	-0.75	-17								
RMBH	30-Jun-10	0.32	0.24	28.56	65%	16%	12%	3.01	10	0.32	0.24	28.54	65%	16%	12%	3.01	10								
STANBANK	31-Dec-10	16.18	0.94	-0.29	9%	16%	1%	132.31	1	16.45	0.94	-0.30	8%	15%	1%	120.90	1								
AVERAGE BEFORE		9.68	0.77	3.08	21%	12%	3%	25.45	5.03	9.88	0.78	3.13	19%	10%	3%	23.04	7.97	2%	1%	2%	-9%	-13%	-10%	-9%	58%
AVERAGE AFTER		9.88	0.78	3.13	19%	10%	3%	23.04	7.97																
ARCELORMITTAL	31-Dec-10	0.41	0.29	4.48	4%	7%	5%	21.82	4	0.52	0.34	2.98	2%	3%	2%	20.16	4								
ANGLOPLAT	31-Dec-10	0.52	0.34	38.94	22%	18%	12%	39.08	18	0.53	0.35	34.90	22%	18%	12%	38.77	18								
AFRICAN RAINBOW	30-Jun-10	0.52	0.34	15.45	17%	11%	7%	8.54	19	0.52	0.34	15.40	17%	11%	7%	8.52	19								
BILLITON	30-Jun-10	0.80	0.44	29.72	25%	26%	15%	17.12	12	0.86	0.46	25.29	24%	26%	14%	16.38	12								
EXXARO RESOURCES LTD	31-Dec-10	0.64	0.39	10.77	31%	30%	18%	15.01	9	0.65	0.39	10.58	30%	30%	18%	14.86	9								
GOLDFIELDS LTD	30-Jun-10	0.50	0.33	14.90	14%	9%	6%	5.15	20	0.50	0.34	14.80	13%	9%	6%	5.12	20								
HARMONY GOLD MINING	30-Jun-10	0.34	0.26	0.82	-2%	-1%	0%	0.45	181	0.34	0.26	0.77	-2%	-1%	-1%	0.40	201								
KUMBA IRON ORE LTD	31-Dec-10	0.52	0.34	141.19	47%	100%	66%	44.66	10	0.52	0.34	138.70	47%	100%	65%	44.58	10								
LONMIN	30-Sep-10	0.57	0.36	23.44	8%	4%	3%	3.89	48	0.57	0.36	23.12	8%	4%	3%	3.85	49								
AVERAGE BEFORE		0.54	0.34	31.08	18%	23%	15%	17.30	35.52	0.56	0.35	29.61	18%	22%	14%	16.96	37.97	4%	3%	-5%	-3%	-3%	-3%	-2%	7%
AVERAGE AFTER		0.56	0.35	29.61	18%	22%	14%	16.96	37.97																
ASPEN	30-Jun-10	0.82	0.45	5.05	20%	18%	10%	4.95	15	0.83	0.45	4.97	19%	18%	10%	4.86	16								
BIDVEST	30-Jun-10	1.49	0.60	6.69	3%	20%	8%	10.62	0	1.83	0.65	5.37	2%	16%	6%	8.15	0								
COMPAGNIE FINANCIERE RICHMONT	31-Mar-10	0.37	0.27	5.16	12%	11%	8%	1.08	26	0.52	0.34	3.91	8%	8%	5%	0.75	38								
CAPITAL SHOPPING	31-Dec-10	1.58	0.61	4.19	126%	23%	9%	5.94	7	2.80	0.74	2.35	43%	9%	2%	0.13	327								
GROWTHPOINT	30-Jun-10	0.65	0.39	1.12	3%	0%	0%	0.07	227	1.47	0.60	-0.08	-76%	-16%	-7%	-17.91	-1								
MONDI LTD	31-Dec-10	1.06	0.51	1.56	4%	6%	3%	26.69	3	1.15	0.53	1.37	2%	4%	2%	20.54	3								
MTN GROUP	31-Dec-10	1.09	0.52	5.22	15%	23%	11%	7.76	17	1.13	0.53	5.09	14%	22%	10%	7.44	18								
NASPERS -N	31-Mar-10	0.61	0.38	7.13	14%	11%	7%	8.73	36	0.63	0.39	6.80	13%	11%	7%	8.25	38								
REMGRO	31-Mar-10	0.09	0.08	57.42	27%	7%	7%	62.94	2	0.09	0.09	49.23	26%	7%	6%	62.83	2								
STEINHOFF	30-Jun-10	1.11	0.53	2.77	8%	14%	7%	2.51	7	1.49	0.60	2.05	4%	8%	3%	1.34	13								
SHOPRITE	30-Jun-10	2.01	0.67	36.03	3%	38%	13%	4.50	18	3.78	0.79	8.43	1%	20%	4%	1.74	48								
TIGBRANDS	30-Sep-10	0.51	0.34	10.26	11%	25%	17%	13.86	14	0.54	0.35	9.78	11%	25%	16%	13.45	14								
TRUWORTHS	30-Jun-10	0.24	0.19	0.00	21%	37%	30%	3.77	14	0.58	0.37	22.68	15%	30%	19%	2.73	20								
VODACOM GROUP (PTY) LTD	31-Mar-10	1.85	0.65	6.51	7%	29%	10%	2.82	20	2.17	0.68	5.78	6%	25%	8%	2.29	24								
AVERAGE BEFORE		0.96	0.44	10.65	19%	19%	10%	11.16	29.00	1.36	0.51	9.12	6%	13%	7%	8.33	39.97	41%	15%	-14%	-67%	-29%	-34%	-25%	38%
AVERAGE AFTER		1.36	0.51	9.12	6%	13%	7%	8.33	39.97																
TOTAL AVERAGE BEFORE		2.63	0.48	15.42	19%	19%	10%	16.02	26	2.87	0.52	14.24	13%	15%	8%	14.05	32.73	9%	8%	-8%	-32%	-21%	-20%	-12%	27%
TOTAL AVERAGE AFTER		2.87	0.52	14.24	13%	15%	8%	14.05	33																

Source: Author